

LIFE

BEN HOGAN TELLS HIS SECRET
THE AMAZING WORLD OF INSECTS:
13 PAGES IN COLOR



**HOGAN APPLIES SECRET;
WHAT IS IT? SEE PAGE 60**

20 CENTS

AUGUST 8, 1955

Never before has **LANE** offered such value as this August Special!



Never before

such a \$59.95 value

made especially to sell during August only for

\$49.95*

Never before

both these features

in a Lane chest at this low price!

• Convenient self-rising tray!

• Bottom-lined storage drawer in base!

Never before

such styling in 3 finishes

at such a low price! Modern simplicity,

craftsman-styled in Blond Oak (as shown—#3190).

Or in Seafoam finished Mahogany (#3191),

and Pearl finished Mahogany (#3192).

August is the thrifty time to buy

Save up to **20%** on a **LANE Cedar Chest**

\$1 down, \$1 weekly at most Lane dealers

August means fabulous savings on famous Lane Cedar chests at leading furniture and department stores. Calculate the savings in *unbeatable* moth protection (just one nice garment saved from moths pays for a Lane at these one-month-only prices). Tote up the savings in storage space.

Give one to someone you love. Your sweetheart or daughter will cherish it for years to come. A Lane Cedar Chest is her symbol of security—her treasure-trove of trousseau loveliness, both before and after wedding bells ring. For birthdays, engagements, weddings, anniversaries, she wants—above all—a Lane Chest. And now, you *save* on it!

Lane is the ONLY pressure-tested, aroma-tight cedar chest. Made of 3/4-inch red cedar in accordance with U. S. Government recommendations, with a free moth-protection guarantee underwritten by one of the world's largest insurance companies, issued upon proper application. Helpful hints for storing are in each chest. The Lane Company, Inc., Dept. R, Altavista, Va. In Canada: Knechtels, Ltd., Hanover, Ont.

Also makers of LANE TABLES



18th Century style Mahogany chest with bottom-lined drawer in base and convenient self-rising tray—(#3195). **NOW ON SALE AT LOW, LOW AUGUST PRICE.**



Modern space-saver Console in Blond Oak designed with sliding shelf (as shown—#C-142), or in lovely Seafoam finished Mahogany (#C-143). **NOW ON SALE AT LOW, LOW AUGUST PRICE.**



Handsome modern design, Seafoam finished Mahogany, with bottom-lined drawer in base (as shown—#3193), or in Pearl finished Mahogany (#3194). **NOW ON SALE AT LOW, LOW AUGUST PRICE.**

*\$5.00 higher in the West due to greater freight costs—and higher in Canada.

How to avoid dry, unruly "lion-mane hair"



New greaseless way to keep your hair neat all day

Hunting for a greaseless hair tonic?

New Vitalis tames hair with V-7, the unique grooming discovery that's not a mineral, vegetable or animal oil. You can use it every day—yet never have an over-slick, plastered-down look.

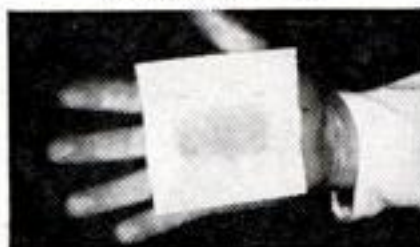
What's more, Vitalis protects your hair and scalp handsomely from annoying dryness. And tests show it kills on contact germs many doctors associate with infectious dandruff.

Try new Vitalis with V-7. You will like it.
(And your mate will purr with pleasure.)

NEW VITALIS

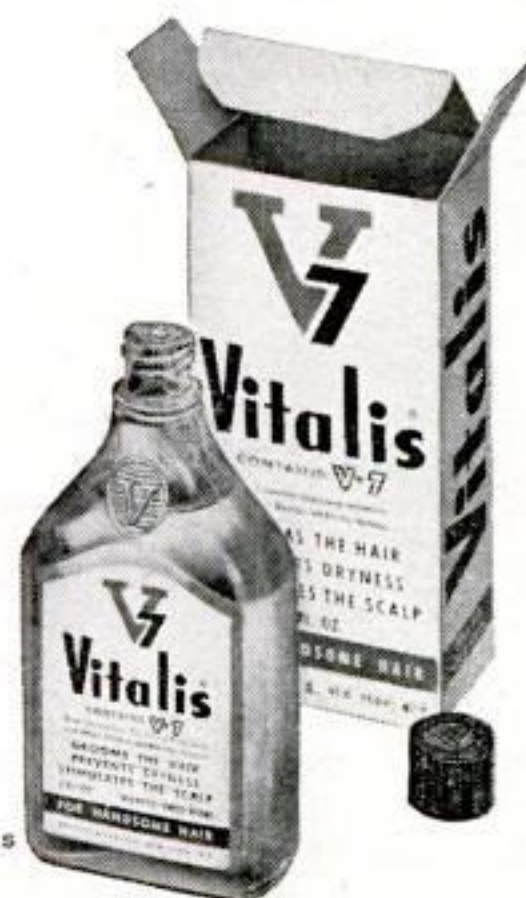


MESSY OILS



"TISSUE TEST" PROVES GREASELESS VITALIS OUTDATES MESSY OILS. In an independent testing laboratory, Vitalis and leading cream and oil tonics were applied in the normal way. Hair was combed and then wiped with cleansing tissue. Unretouched photographs above show the difference in results!

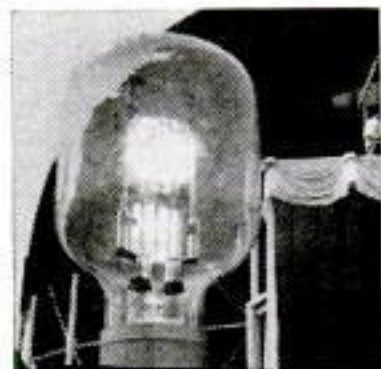
ANOTHER FINE PRODUCT OF BRISTOL-MYERS



NEW
Vitalis®
Hair Tonic
WITH V-7®

Atomic age's big business

As scientists gather at Geneva to discuss atoms for peace, the nation's atomic industries, run by young men, have already become a big business.



POWER FROM THE ATOM

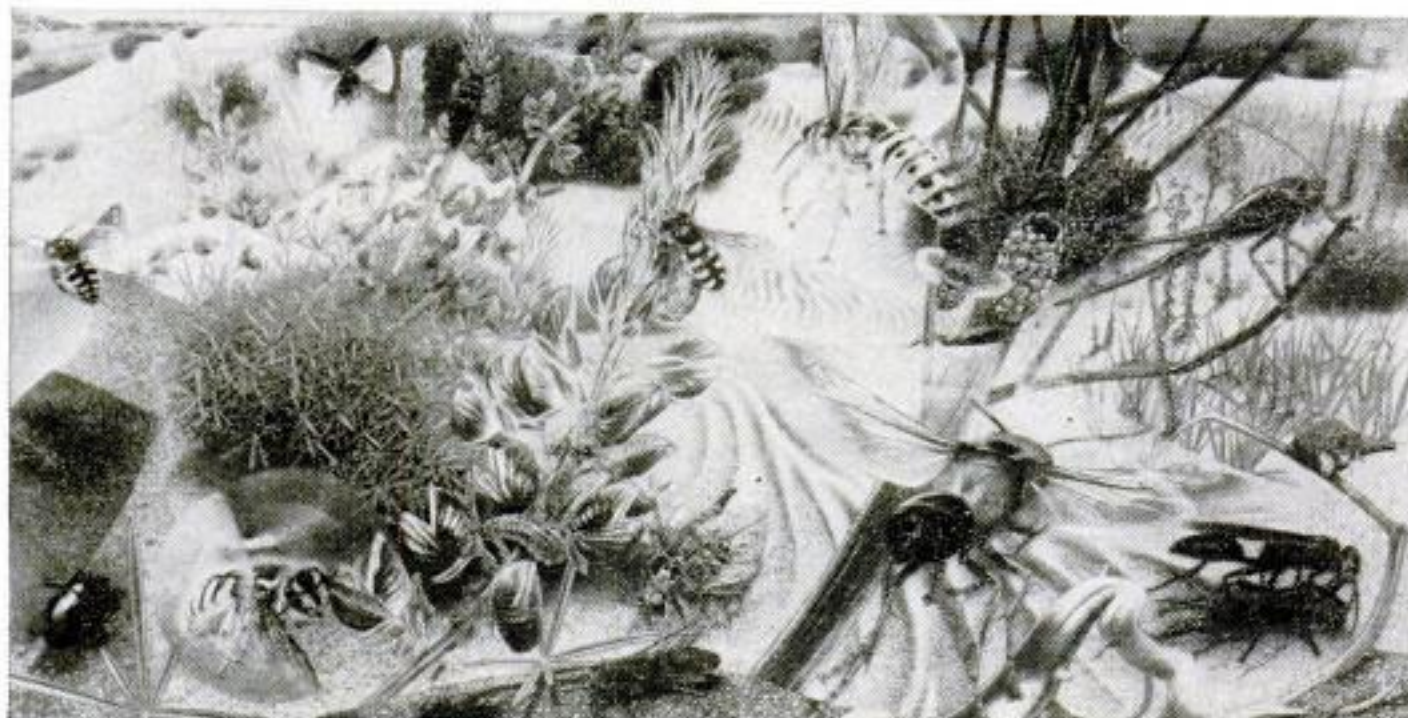
A twist of the wrist

Retiring from tournament golf, Ben Hogan reveals the "secret" experts could not fathom, a technique that saved his game when it seemed almost ruined.



BEN HOGAN'S GRIP

The insect world



ARTIST LINSENMAIER PAINTED INSECT LIFE ON CALIFORNIA'S ANTIOCH DUNES

Swarming over the earth, insects have evolved a complex pattern of development and flight. In 13 pages of photographs and paintings LIFE presents an intimate look at this world of buzzing, flying creatures which abound in summer.

New satellite for earth

The White House announces U.S. plans for building an earth-circling satellite similar to the MOUSE which was first pictured in LIFE Jan. 24.



THE MOUSE

Two heads-up horsemen

Swaps' owner Rex Ellsworth and his partner Meshach Tenney find that horses are stupid, raise them unconventionally, never bet and expect to beat Nashua.



SWAPS' REX ELLSWORTH

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As Ben Hogan takes a swing, he uses the secret that saved his game, and then reveals what it is (see pp. 60-63)

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11—JERRY COOKE
12, 13—ERIC CABLE FOR VANCOUVER PROVINCE
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Against Tooth Decay
...With Just One Brushing!*

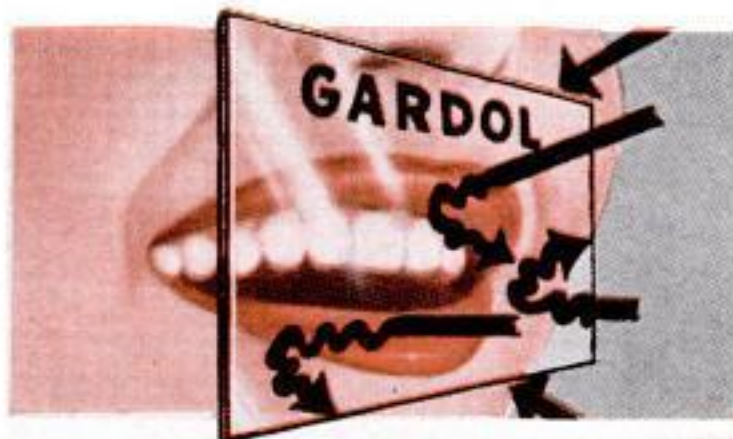
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**MINUTES AFTER
BRUSHING WITH ANY
TOOTHPASTE**



**DECAY-CAUSING
BACTERIA RETURN TO
ATTACK YOUR TEETH!**

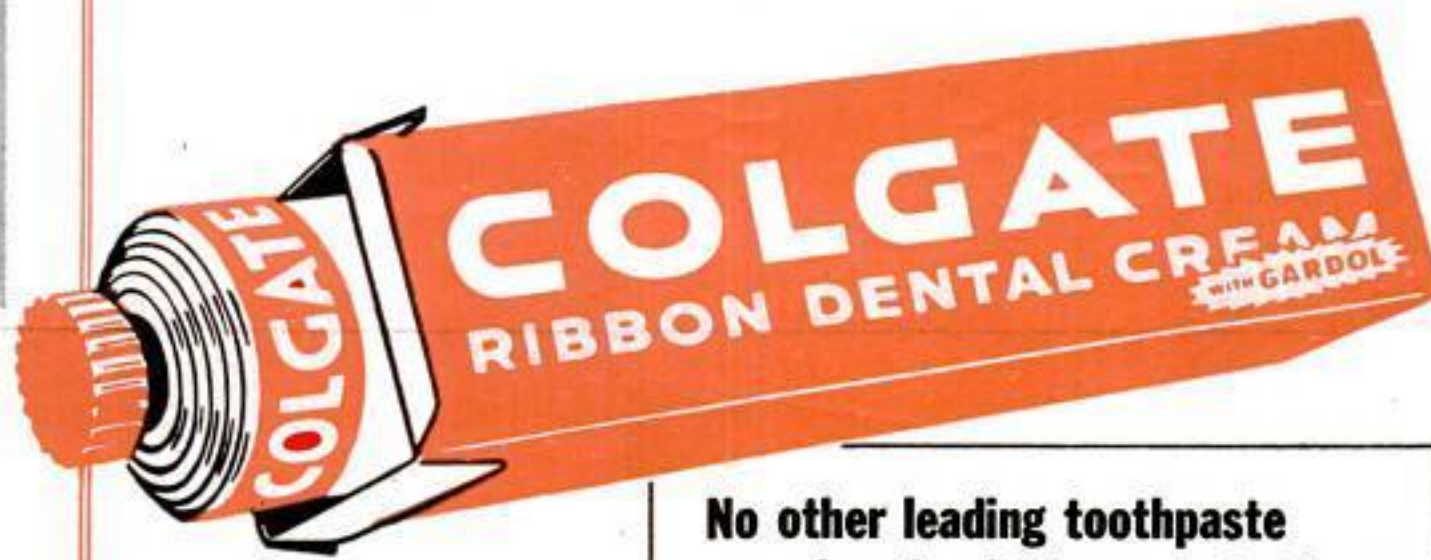
**12 HOURS AFTER
ONE COLGATE BRUSHING
GARDOL IS**



**STILL FIGHTING
THE BACTERIA THAT
CAUSE DECAY!**

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**No other leading toothpaste
can give the 12-hour protection
against tooth decay you get with
Colgate Dental Cream with Gardol**

Cleans Your Breath While It Guards Your Teeth

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AFTER COLGATE'S.



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get between
you and
the flavor!

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Yes, this easy-drawing but hard-working filter sure delivers the goods on flavor. Popular filter price. This new Marlboro makes it easy to change to a filter. This one you'll like.

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FLIP-TOP BOX

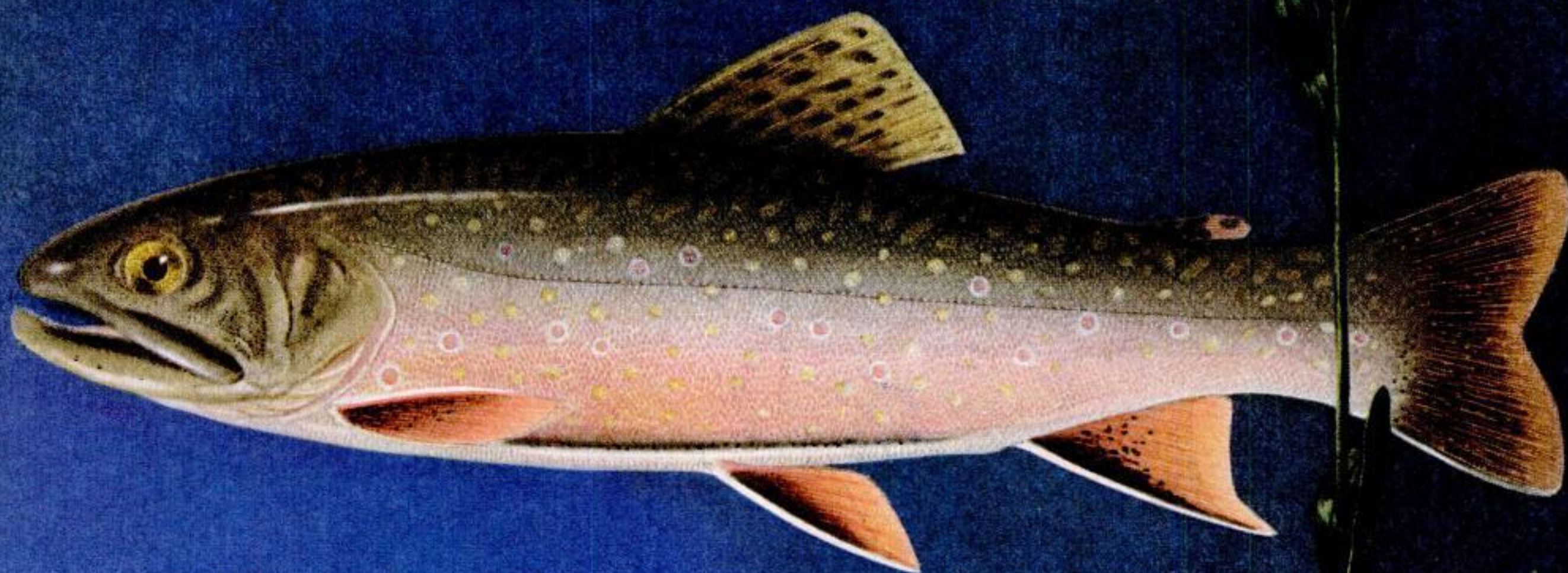
Firm to keep
cigarettes from
crushing.
No tobacco in
your pocket.



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FILTER PRICE

(MADE IN RICHMOND, VIRGINIA, FROM A NEW PHILIP MORRIS RECIPE)

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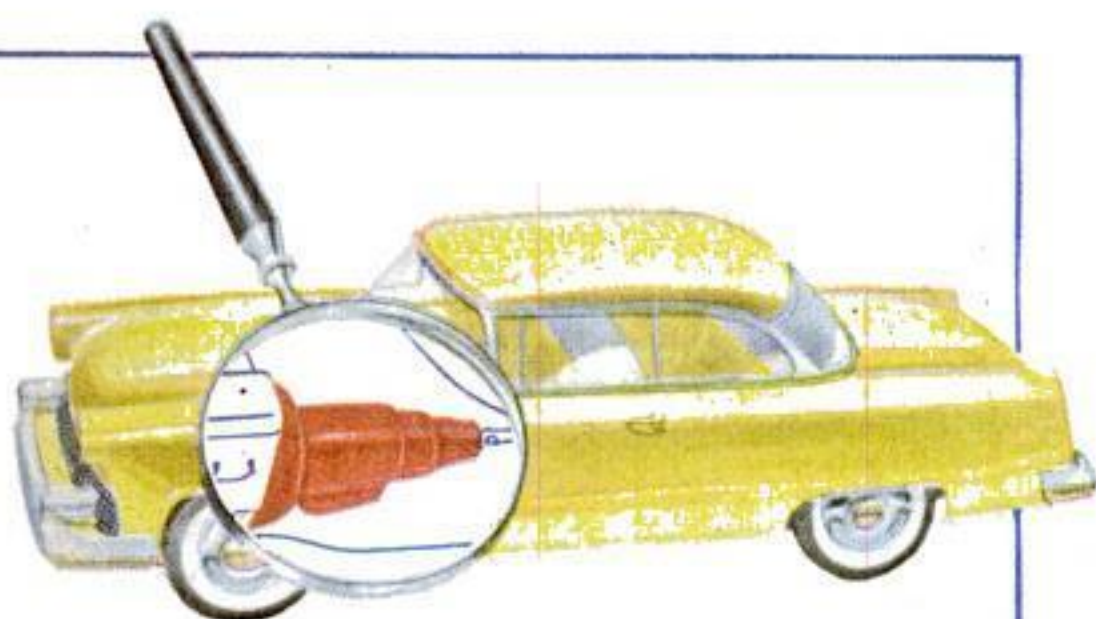


**smooth as a trout
heading for home!**

B-W Automatic Transmissions

DESIGNED

(*So quiet you can hardly tell when they shift!*)



Here engineers' dreams come true! B-W Automatic Transmissions permit engine power to be shifted to the wheels in a continuous flow. Pick-up is made faster, cruising smoother. Yet 15% fewer engine revolutions are needed—an important economy factor. Also made for light trucks.

Maybe you think we're exaggerating—but just try a B-W Automatic Transmission ride! You'll be thrilled right down to your toes on the accelerator. You'll hear the wind's rush, the purr of the engine—but no shift noise, no clicks or commotion.

Response is instant. You sweep forward on a single, mounting stream of power. In effect, a B-W automatic is two transmissions in one. It gives you the smoothness of a *torque converter*, plus the "go" of *gears*.

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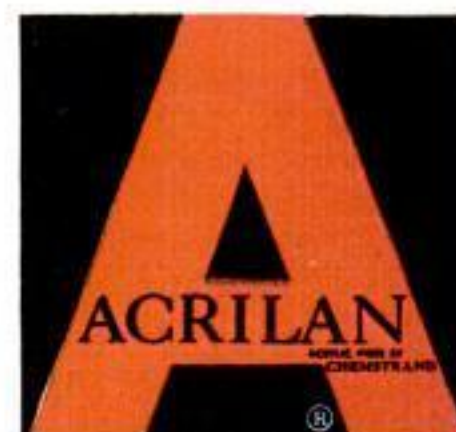
what *Debbie Reynolds* has you can have too . . .



DEBBIE REYNOLDS
co-starring in
Metro-Goldwyn-Mayer's
CinemaScope and Color
production of
"THE TENDER TRAP"

a luxury sweater of Acrilan

You can have a sweater as warm and soft and wonderful as a loved one's arm around your shoulders . . . a sweater that keeps its shape faithfully . . . washes like a dream . . . and dries as fluffy-soft as it came from the store. No blocking either because it won't shrink or stretch! You can have all this thanks to luxurious new Acrilan acrylic fiber. The first Acrilan luxury sweaters are now in the stores in the most heavenly shades and styles. Hurry down today and take your pick!



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Fabulous hair dressing sprays pure excitement into your hair... right down to your very scalp!



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brings out a shimmering softness you haven't seen in years!

Helene Curtis lanolin discovery*

gives you what no other hair dressing can . . . pure lanolin (no filler oils)
in mist-fine spray. It actually beautifies hair as nothing before!



SPRAY IT IN . . . Pure lanolin right down to your very scalp!



BRUSH! . . . Warm high-lights appear instantly, all through your hair!



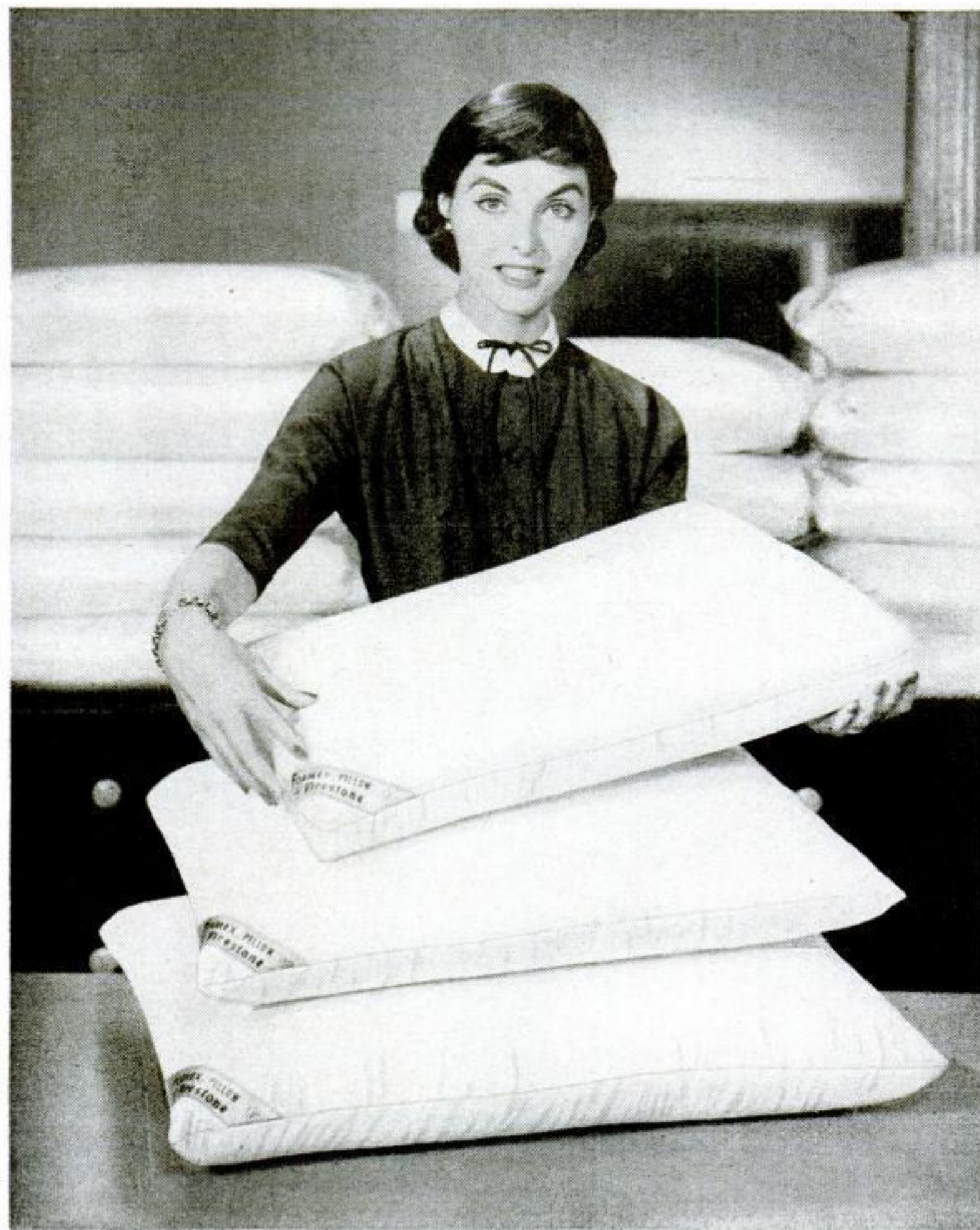
THAT'S ALL! . . . The easiest way in the world to have beautiful hair!



Does your present hair dressing give you a "top-of-the-hair shine"—and nothing more? That's why Helene Curtis *invented* LANOLIN DISCOVERY! Spray it—right down to your scalp. Brush. What happens to your hair is practically a miracle! Because for the first time in your life you're getting *pure lanolin*—in the most effective form ever devised to give your hair the natural brilliance, the silken smoothness, the thousand-and-one highlights you've always wanted. Why live another day without it?

LARGE SIZE \$1.25 *TM
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SALE! Limited Time Only
GIANT ECONOMY SIZE only \$1.69
Contains 2 1/4 times as much as large size plus tax



Today, stock up on plump, lively FOAMEX PILLOWS *low-priced from \$5.95* *at White Sales!*

ONLY A FOAMEX PILLOW GIVES YOU ALL THIS:

- Relaxing, petal-soft Foamex comfort!
- Year after year of plump-perfect service!
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- Protection from allergies, too!



Here's your chance to treat your whole family to superb Foamex sleep-comfort! For, right now, fine stores all over the country are featuring famous Firestone Foamex Pillows at down-to-earth White Sale prices.

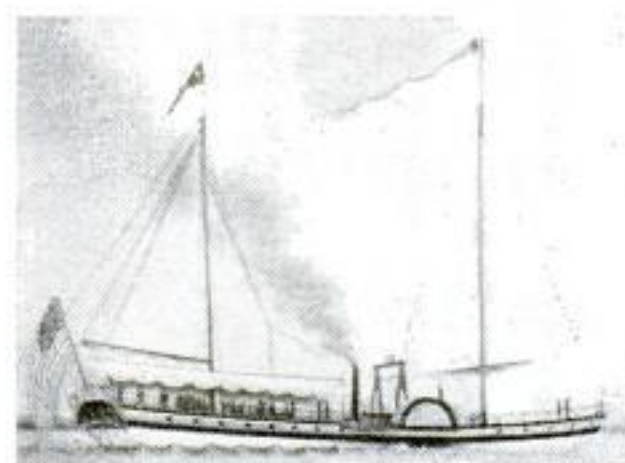
Mind you, these wonderful pillows offer *exactly* the same superb comfort you enjoy in luxurious Foamex Mattresses and furniture cushioning. It's yours *now* for as little as \$5.95 per pillow!

So, while you're at your favorite store's August sale, be sure to supply the family with Foamex Pillows. You'll find them in 3 sleep-perfect sizes—the Standard at \$5.95, the Deluxe at \$7.95 and the Supreme at \$9.95. Look for the distinctive Foamex Pillow carton.

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LETTERS TO THE EDITORS



STEVENS' STEAMBOAT "PHOENIX"

STURDY AGE OF HOMESPUN

Sirs:

I thoroughly enjoyed "The Sturdy Age of Homespun" (LIFE, July 18). As you say, Robert Fulton, who used a British-made steam engine, was the first American to popularize the steamboat. However it was Colonel John Stevens, a contemporary of Fulton, who was responsible for the design, construction and operation of the first wholly American-built and American-powered steamboat of commercial importance (1808). This steamboat, the *Phoenix* (above), was also the first oceangoing steamship (1809). Stevens built the first steam-driven ferryboat (1804), the first American steam locomotive (1825), and he prevailed on Congress to pass the first patent laws (1790-91).

WILLIAM B. CRIST

Assistant to the President

Stevens Institute of Technology
Hoboken, N.J.

Sirs:

Your readers may wonder just why a four-sided globe would give Franklin's street lamp more draft and prevent smoking. Franklin points out in his *Autobiography* that the main improvement consisted of "a long funnel above to draw up the smoke, and crevices admitting air below." The four-pane construction had its primary advantage in ease and cheapness of replacing the glass if broken.

RAYMOND A. BISWANGER JR.

Athens, Ga.

Sirs:

I believe that your reference to Aaron Willard as the inventor of the banjo clock is an error. This clock was invented by his brother, Simon Willard. I possess the original letters patent for this clock, issued in 1802 to Simon Willard, my great-great-grandfather, signed by President Thomas Jefferson and Secretary of State James Madison.

MARY M. COWELL

Westport, Conn.

● Great-great-granddaughter Mary Cowell is correct.—ED.

Sirs:

I regret that you did not mention Glassboro, N.J. in your section on glassware. In 1775 glass manufacture was started at Glassboro by the Stenger Brothers. The glassworks at Glassboro operated longer than any other company in the United States. It was absorbed by the Owens Bottle Company of Toledo, Ohio in 1918 and continued making glassware until 1929.

CAROL WARE

Glassboro, N.J.

Sirs:

You state that Booz was the name of a Philadelphia distiller and thus led to a new word in our language. But wasn't "booze" a slang word for liquor used by members of the British

underworld as far back as the 16th Century?

ALFRED P. MOYSE JR.

Fredericksburg, Va.

● "Booze" was common as far back as 1560 in the language of English thieves and beggars. It may have come from the Dutch word *buizen*, or the Low German *busen*, meaning to drink in excess.—ED.

WINNING THE PEACE

Sirs:

Paul G. Hoffman's article "The Peace We Fought For Is in Sight" (LIFE, July 18) is one of the rare bipartisan reviews of the post World War II peace offensive I have seen. It shows keen insight and gives broad credit for the constructive things that have been done. Paul Hoffman is my nomination for Republican standard bearer should the President choose not to run again.

MARK HATFIELD
State Senator

Salem, Ore.

Sirs:

I have been inspired to change my attitude of "feeling sorry for myself" when each pay check shows \$20.90 taken for income tax. Mentally I have been chalking up this sum to the fearful price of war. Now I am thinking of it as the "widow's mite" given to help win the peace.

ELSIE G. SIMMONS

Air Force Finance Center
Denver, Colo.

Sirs:

When Russia really changes and wants to talk peace we shall have ample evidence: she will free the satellites, withdraw from Korea, China, etc., open the churches and invite the missionaries back. Until such time, pray like mad and don't let anyone put us to sleep with visions of Russia's economy's collapsing and her really wanting peace now.

MRS. L. W. RING

Lima, Ohio

MEDITERRANEAN LEISURE LAND

Sirs:

You have hacked my favorite topic—Italy ("Mediterranean Leisure Land," LIFE, July 18). Most of the photos—bathing beauties, fat tourists and old men—could have been photographed in New York City. In order to entice

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SUPER- PATENTED STICK



Now with **SUPER-STICK**. They stick better, protect better. Won't loosen in water.

LETTERS TO THE EDITORS CONTINUED

Americans to this playground, you should have thrown in a view of aquaplaning on the Lago di Garda, sailing at Rapallo and Portofino (*below*), strolling through the hills of the Abruzzi or moonlight serenading in gondolas at Venice.

LETITIA BALDRICE

Rome, Italy



SHIPS IN PORTOFINO HARBOR

Sirs:

Your pictures of Italy brought back beautiful memories. Everyone told me I was crazy to go there in winter but judging from the overcrowded Blue Grotto, I was right. I didn't have to share the wonderful place with hundreds of other tourists!

ANN MARCIA LEE

Chicago, Ill.

DOCKING OF ICEBOUND DC-4

Sirs:

I thought you might be interested to know that Pilot Mills L. Bale, who successfully crash-landed the DC-4 on icy Hudson Bay ("The Perilous Docking of an Icebound DC-4," LIFE, July 18), saving the lives of all aboard, was killed June 17 when his C-46 crashed on the north shore of Hudson Bay. Captain Bale, a World War II pilot, earned a D.F.C. for his handling of a plane shot down in the Indian Ocean by the Japanese.

MARY R. MOORE

Arcadia, Calif.

LAKESIDE FAITH

Sirs:

Our uncle, the Reverend William C. Prout of Herkimer, N.Y., was also a minister of St. Peter's-by-the-Lake ("Lakeside Faith," LIFE, July 18) early in the century. Your story reminded us nostalgically of the congregation coming in little boats and the flowers for the altar. Our Irish terrier attended church once or twice. On hearing the voice of the Reverend Mr. Prout, he marched down the aisle and waited for the lesson to be read.

AGNES SANBORN PERSON

Port Jervis, N.Y.

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Sirs:

The Roman Catholic Church does not permit its members to attend or participate in any non-Catholic service with the following exception: on such an occasion where good reason requires their presence—never as a participant—but as a spectator. An example of this would be the wedding or funeral of a non-Catholic friend.

THOMAS P. DARMODY

Naugatuck, Conn.

DISARMAMENT AND CONFIDENCE

Sirs:

Your two editorials "Disarmament and Confidence" and "Confidence and Caution" (LIFE, July 18) are healthy, invigorating expressions of timeliness and clarity seasoned with the essence of "true Americanism." Editors today often seem timid in facing squarely the specifics of our democratic fabric or else are hazy as to just what these basic elements are. Such evasions or omissions do not often occur in your editorials.

C. W. CHRISTENBERRY
President

American-Korean Foundation
New York, N.Y.

ACTORS IN DIXON-YATES CAST

Sirs:

Re "The Speaking Parts in Dixon-Yates Cast" (LIFE, July 18): nothing anybody can say will "lessen its impact on the 1956 political campaigns." When this giveaway Administration is buried by the voters at the polls next year, Dixon and Yates will be major pallbearers.

ALLEN KLEIN

Mount Vernon, N.Y.

KREMLIN BEAMS SMILES

Sirs:

I do not trust those smiles of the Russian leaders ("Kremlin Beams Smiles to U.S.," LIFE, July 18). Those drinks that they hold in their hands may have more to do with their exhilaration than any real friendship toward us.

MARY LEONARD ARNOLD
Florence, Ala.

Sirs:

The fact that both Malenkov and Bulganin are wearing the well-known "Windsor knot" is surprising. This is a popular Western way of tying a cravat, and the Soviet adoption of it is certainly a novelty in international relations.

JAN DRABEK

Washington, D.C.

WHICH EGG?

Sirs:

The herring gull is not the only creature bamboozled by counterfeit eggs ("Which Egg Will She Sit On?" LIFE, July 18). Under the step of our house we found a family of two adult and six baby spotted skunks. When we pried the step up we saw that Father Skunk was batting a china egg against the side of the step, trying to break it. Further investigation revealed a dozen more china eggs, none broken. Though we have thoroughly investigated the situation we never discovered where the eggs came from.

BEN MACOMBER

Burlingame, Calif.

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**...never an
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*...and, Squirt has a
fresh, clean taste in
mixed drinks, too!*



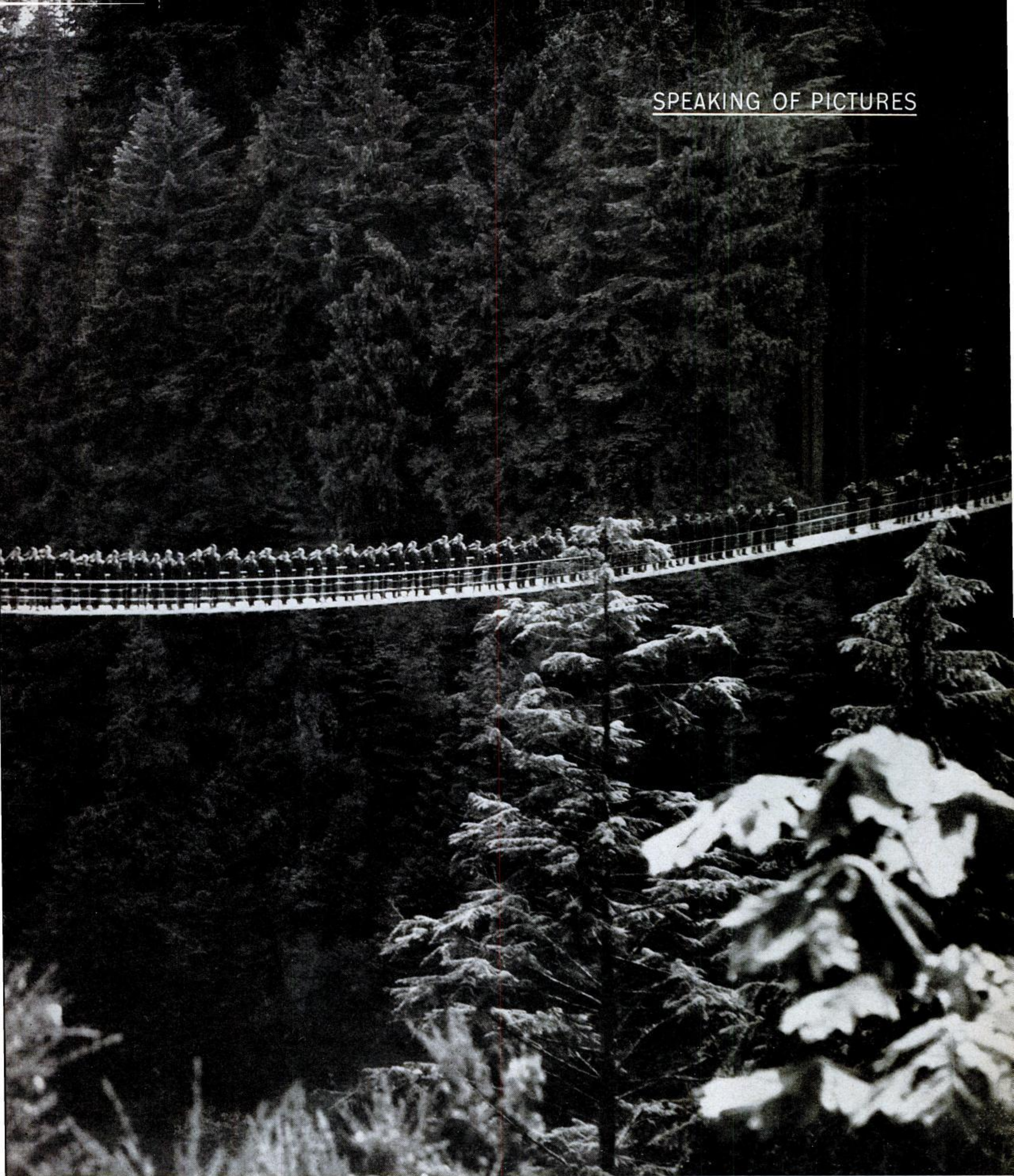
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Cadets' Suspended Salute

AIRMEN SWAY ON LONGEST HANGING FOOTBRIDGE

SPEAKING OF PICTURES

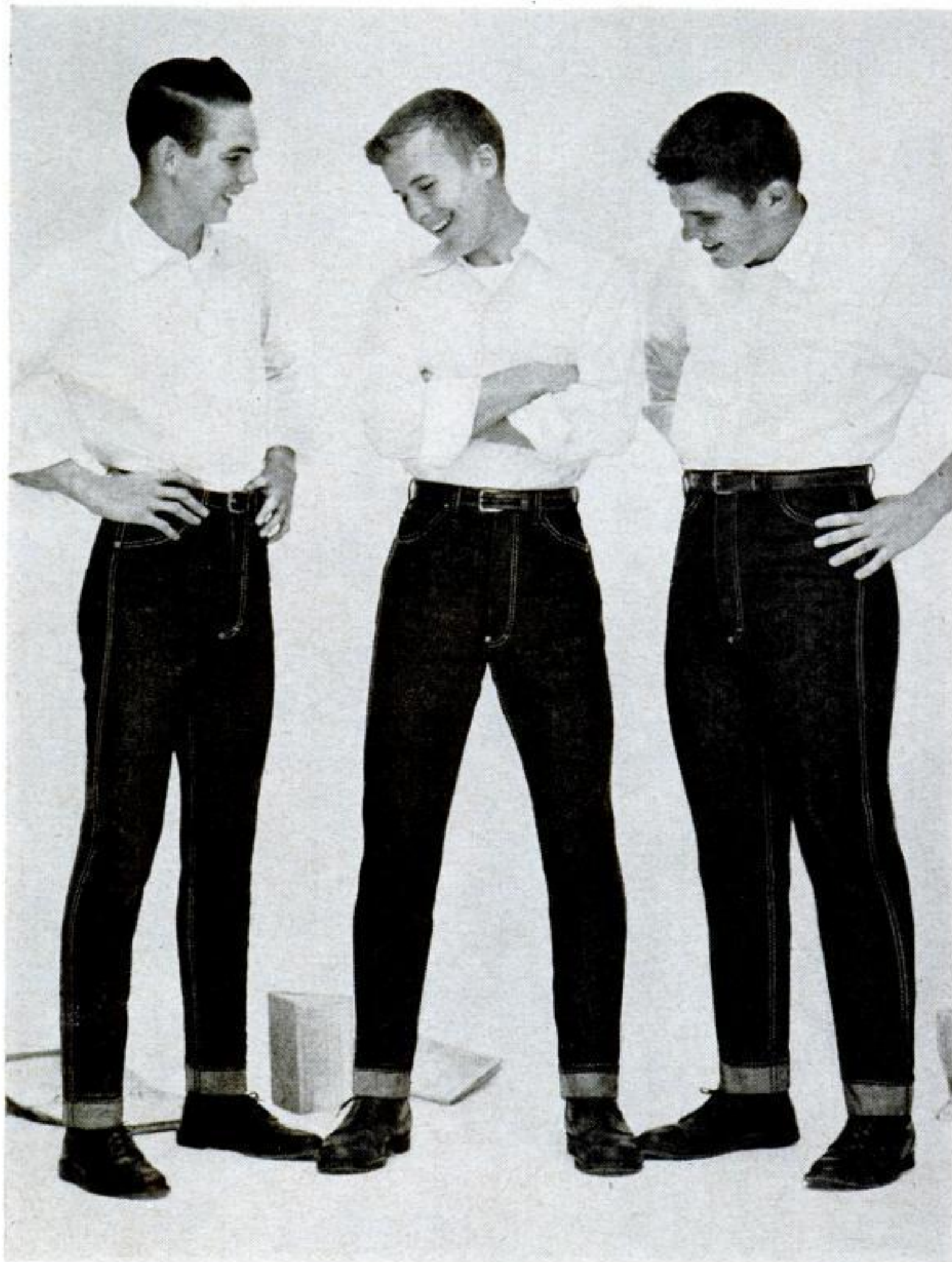


These 103 air cadets are snapping to a salute on the world's longest suspension footbridge which swings 230 feet above the Capilano River near Vancouver, B.C. Members of Canada's teen-age Air Cadet League, they came from all over Canada to attend a two-week training camp and were taken on a sight-seeing

trip to the bridge, where the Royal Canadian Air Force assembled them for a photograph. The 450-foot bridge rocked and swayed as the last cadets edged aboard and Photographer Eric Cable snapped this picture, although the bridge is designed to carry five times the eight-ton load the cadets put on it.

Just in time for school

3 new Lee Riders styled for trim fit whether you're slim, regular or husky



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You "belong" in

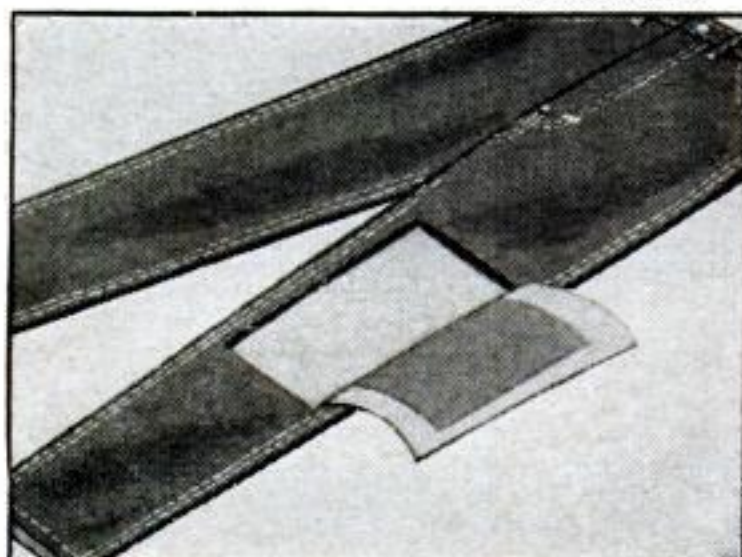
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ORANGE PIE

(Makes 9" single crust pie)

- 1 3-oz. package orange gelatin
- ¼ cup sugar
- 1 cup hot orange juice
- 1 teaspoon grated orange rind
- 1 cup undiluted Carnation
- 2 tablespoons lemon juice
- 9" graham cracker crust*

*For 9" graham cracker crust, mix 1½ cups graham cracker crumbs with ¼ cup melted butter and 2 tablespoons sugar. Line sides and bottom of 9" pie plate.



Dissolve gelatin and sugar in hot orange juice. Add rind; chill until thickened (20-30 minutes). Chill Carnation in refrigerator tray until soft crystals form (about 15-20 minutes).



Whip Carnation until stiff (1 minute). Add lemon juice; whip *very* stiff (2 minutes). Fold whipped Carnation into chilled gelatin. Pour into crust. Chill until firm (about 1-2 hours).



"from Contented Cows"



**"They go fast
—better get
a spare"**

Red means "look out"—Little Red, here, is one of the new Kellogg Kids painted by Norman Rockwell. You'll be seeing him any day now at your grocer's, on Kellogg's Corn Flakes new "happy reminder" packages.

When he waves that finger at you as you come down the aisle with your shopping cart, he'll be offering this friendly little hint: *"They go fast—better get a spare."* Very good advice!



**Norman
Rockwell**



THEIR FACES SET IN CONCENTRATION, ENGINEERS BEING TRAINED BY INDUSTRIES TO BUILD ATOMIC REACTORS LISTEN TO A LECTURE AT THE OAK RIDGE SCHOOL

YOUNG ENGINEERS USHER IN A NEW ERA

ATOMIC INDUSTRY IS ALREADY BIG

The rapt young nuclear engineers above are the future executives of a new industrial age—an age powered by the inexhaustible resources of atomic energy. Last week, 10 years after the first bomb at Alamogordo cast a mushroom cloud of fear over the world, the atom meant more than just fear. It had graduated from the laboratory and had moved into the production plant, with the result that products of atomic science were evident in every corner of the U.S. economy (*see chart, next two pages*).

The atom business now directly supports 130,000 Americans and governs the lives of

some 850,000 others. It is a major source of revenue for 350 U.S. business firms. More than \$80 million of private funds have been spent on research and development and many big corporations have atomic departments. The atom is still dominated but no longer monopolized by the Atomic Energy Commission, for it has become a booming private enterprise which affects every industry in the country, creating new ones and transforming others. Uranium production is now a \$100 million business; \$30 million worth of Geiger counters and other atomic instruments are being turned out each

year, and the day of commercial atomic power is at hand. Eight atomic power plants are in different stages of planning and completion, and last month the first atom-generated commercial current in the U.S. started to flow (*p. 25*).

On these pages LIFE reports on U.S. progress in the development of atomic energy for peaceful purposes. At Geneva next week more than 1,000 scientists from all over the world will get together for a sweeping review of this subject. What we have done will be stacked up against what Russian scientists have accomplished. For a preview of that, see page 23.

FUEL PRODUCTION



PROSPECTING



MINING

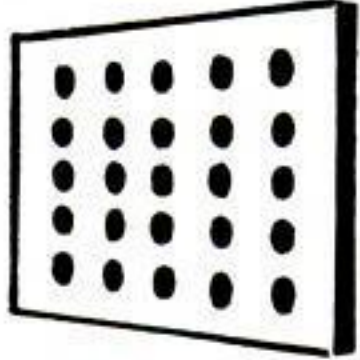


ORE PROCESSING



FUEL ROD FABRICATION

REACTOR INSTALLATION



REACTOR COMPONENT
MANUFACTURE



DETECTION DEVICE
MANUFACTURE



CONTROL INSTRUMENT
MANUFACTURE



BONUS FUEL



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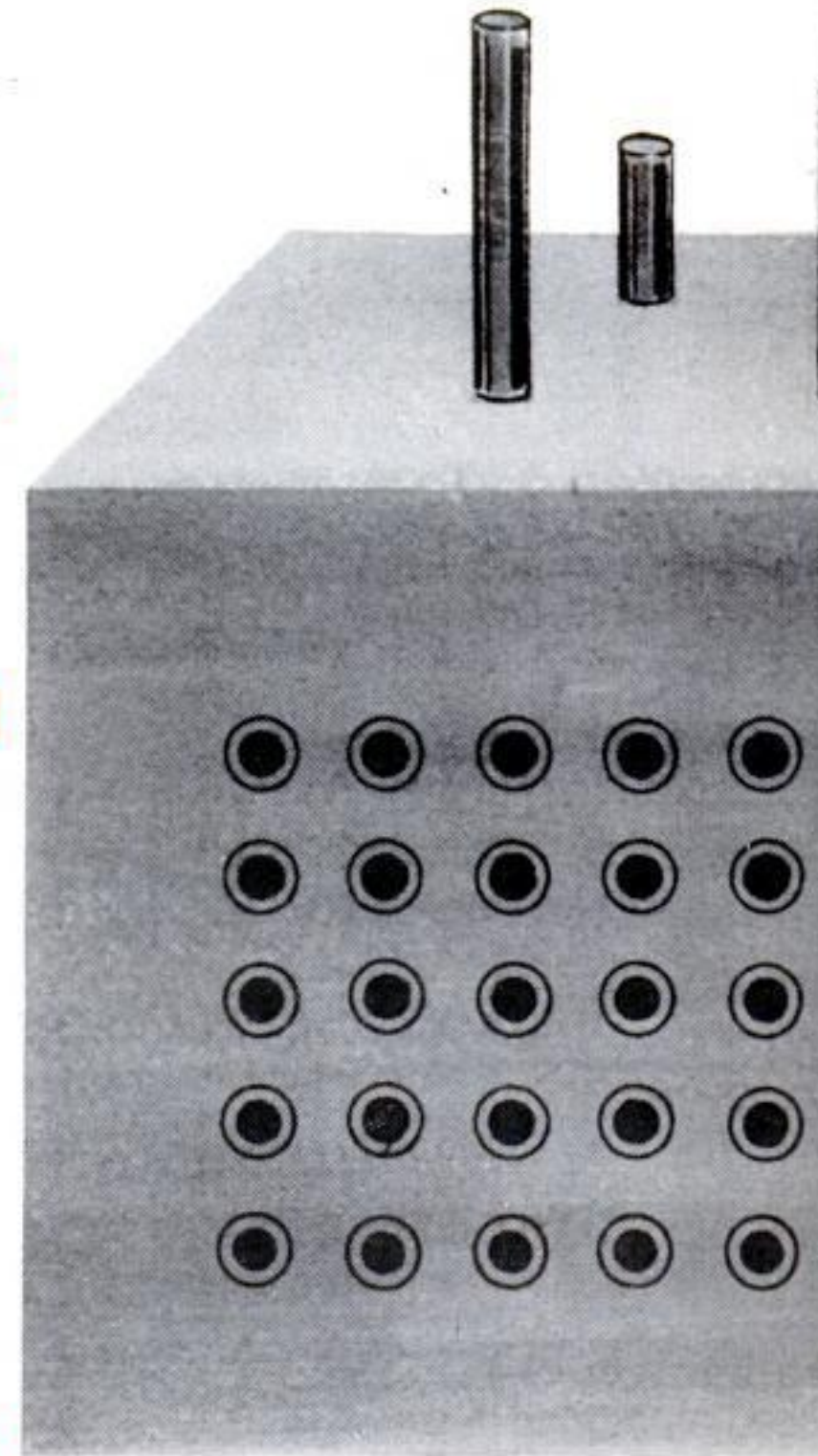
ROBOT EQUIPMENT
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CONSTRUCTION
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INDUSTRY

THICKNESS AND DENSITY GAUGES



CIGARETS



LINOLEUM

RESEARCH WITH "TRACERS"

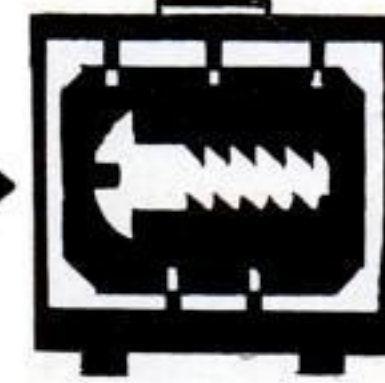


TIRES



FLOOR WAX

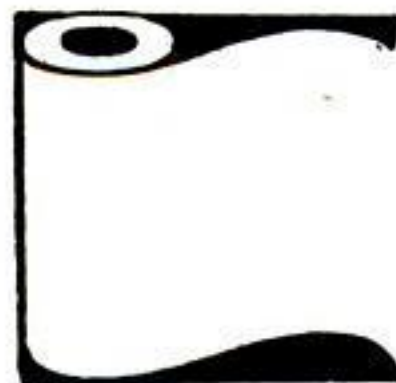
RADIATION



INDUSTRIAL
RADIOGRAPHY



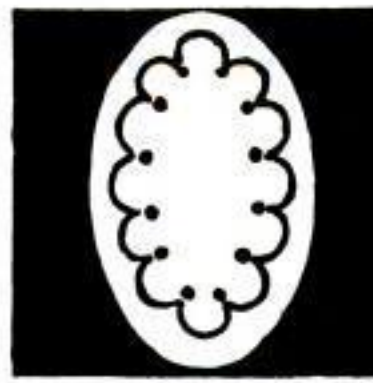
CHEMICAL
TRANSFORMATION



PAPER



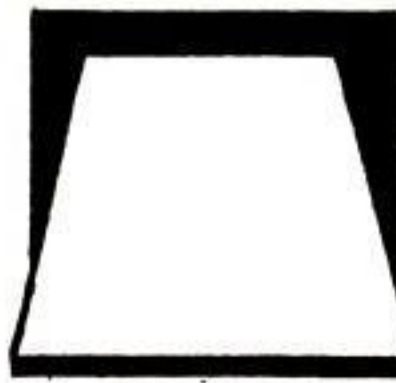
PLASTIC FILM



SOAP



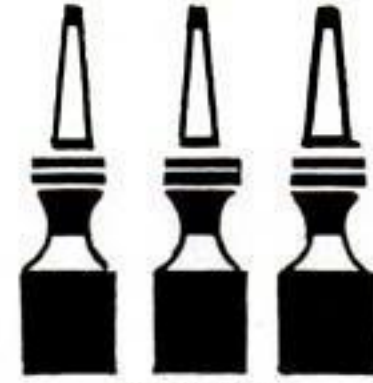
WEED KILLERS



METAL PLATING



MOLTEN GLASS



MOTOR OIL



COLD CREAM



TOOTHPASTE



PIPELINES

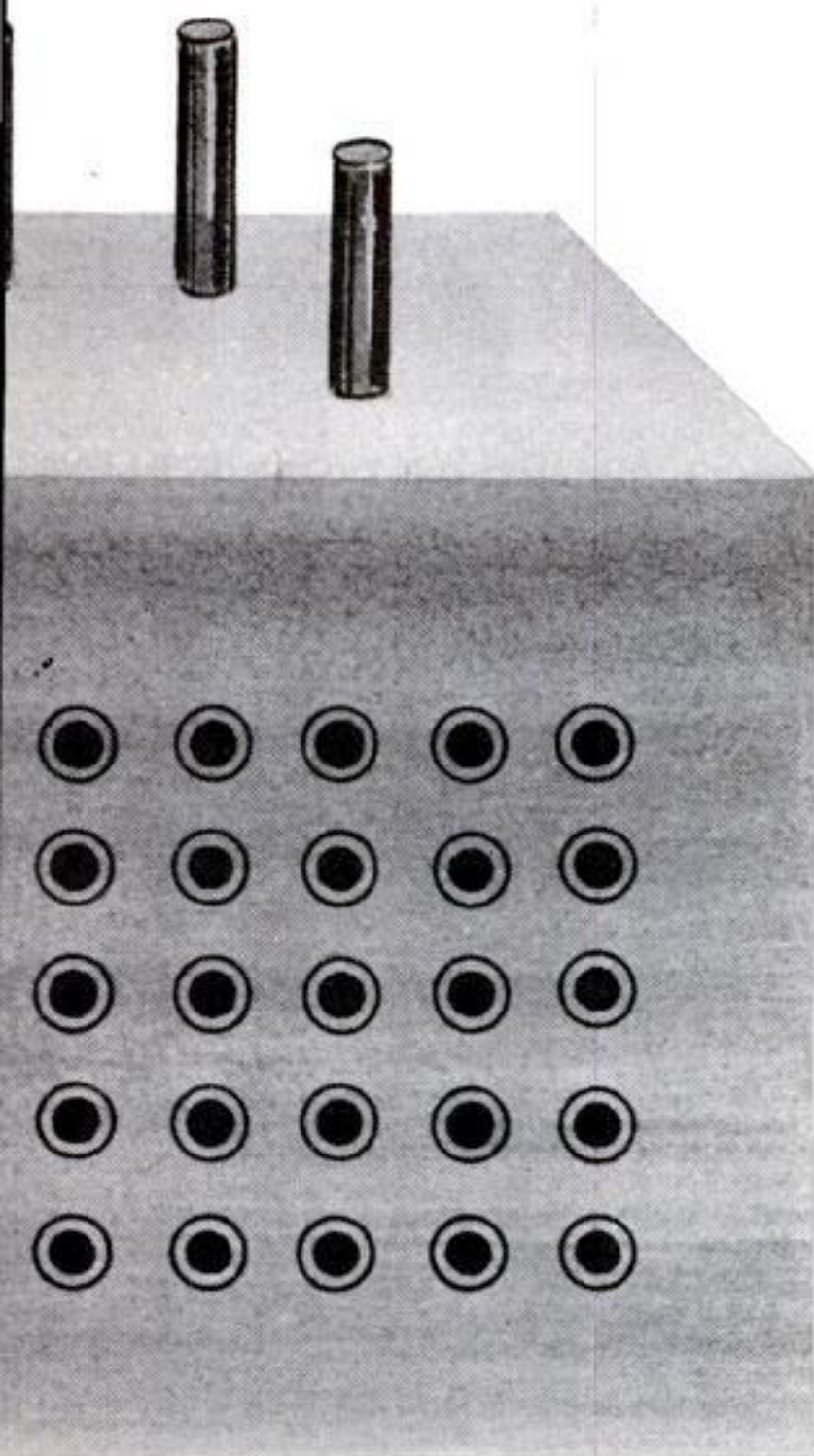
FROM PROSPECTING

The atomic industry is a young octopus with tentacles that branch out all over the U.S. industrial map, as shown by this diagram. The heart of the industry is reactor operation, which forges the industry's salable commodities—heat and nuclear radiation.

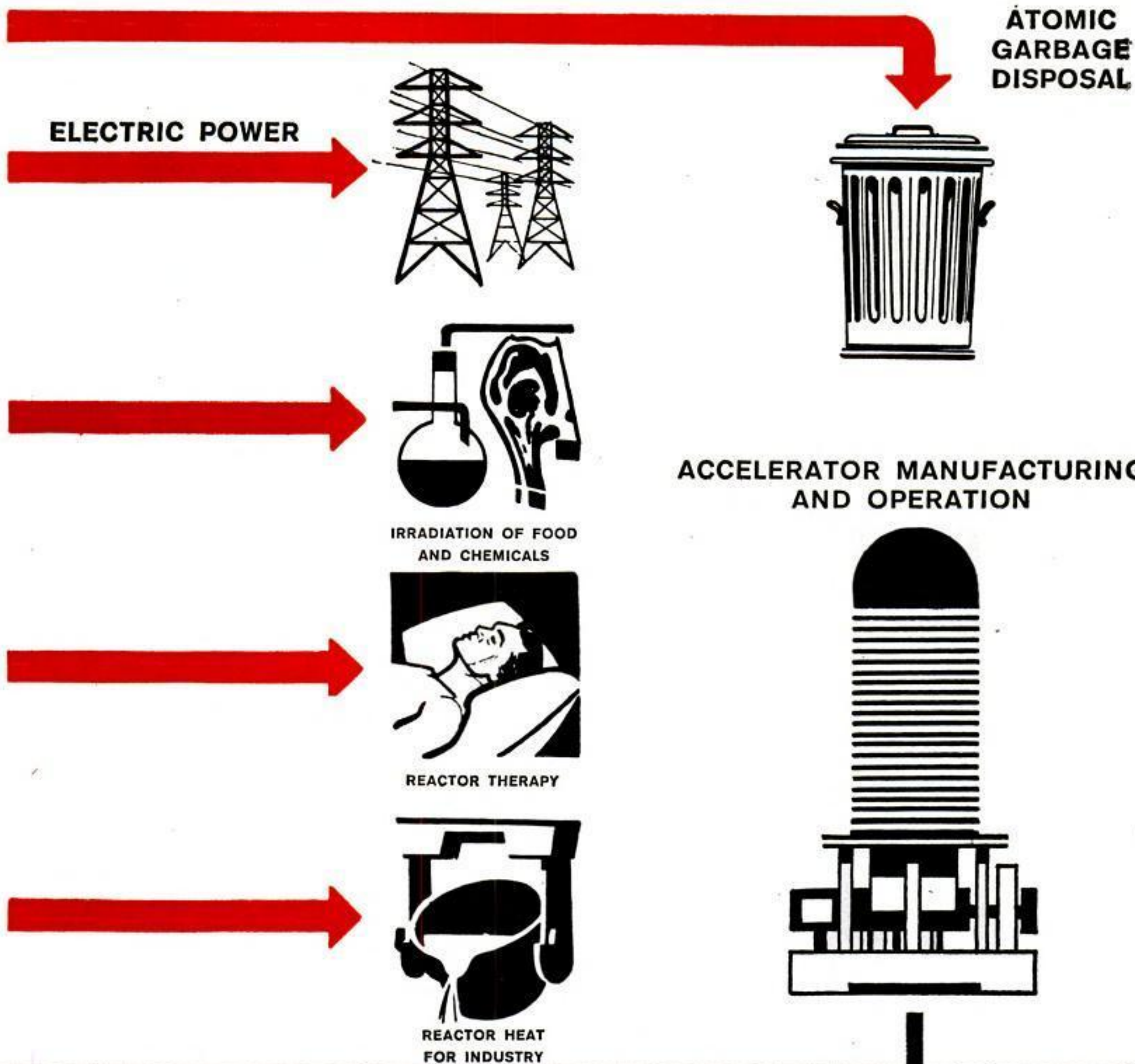
The production of fissionable fuel for the reactors involves four operations (*top, left*), from uranium prospecting to the manufacture of fuel elements. Some reactors also produce a bonus of additional fuel by forming fissionable plutonium from nonfissionable U-238. The complicated techniques involved in building reactors have created other fields for the manufacture of specialized products like robot equipment. And radioactive ash produced by reactors has created an opportunity for a new business specializing in atomic garbage disposal.

Heat from the reactor can be converted

OPERATION

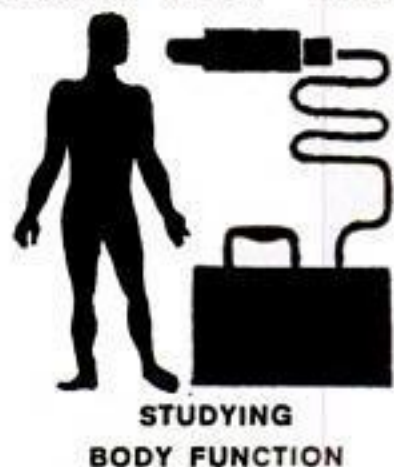


ISOTOPES

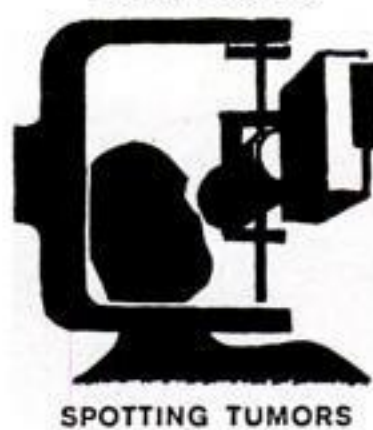


MEDICINE

RESEARCH WITH "TRACERS"



DIAGNOSIS



TREATMENT



AGRICULTURE

RESEARCH WITH "TRACERS"



RADIATION EFFECTS



TO INSURANCE: INDUSTRY'S VARIED FACETS

into electric power, which will become the industry's biggest product. (In the future the same heat may be used to smelt metals.)

The reactor is also tapped directly for radiating neutrons, some of which are used experimentally to irradiate food and treat cancer patients. Most, however, are used to make radioactive isotopes. In industry these isotopes are used to check the uniformity of products like cigarettes and linoleum, to check the quality of rubber tires and toothpaste, to make X-ray-like photographs of metal castings and to change the chemical properties of plastics. In medicine, isotopes have already saved more lives than were destroyed at Hiroshima and Nagasaki. They are used as tracers to follow the spread of medicines through the body and as a source of rays to diagnose and treat tumors.

In agriculture, isotopes irradiate food to

protect it from spoilage, improve crops by genetic mutation, control insect pests and trace how effectively animals assimilate fodder or plants fertilizer.

The reactor is not the only source of energy. Another source is the atomic accelerator—a machine which hurls forth beams of accelerated particles. These particles have important uses in situations where an intense beam of radiation is required, rather than an isotope's diffused glow.

Inevitably the atomic industry, like all industries, is buttressed by desk-bound activities (right). Nuclear consultants find new markets for atomic products; the Atomic Industrial Forum surveys the field of industrial atomic energy; and a growing number of insurance companies have shown a willingness to protect industries against the unfamiliar hazards of the atomic age.





POWER MAGNATE, Walker Cislcr, 57, the president of Detroit Edison, heads utility group planning to build an atomic power plant in Michigan.



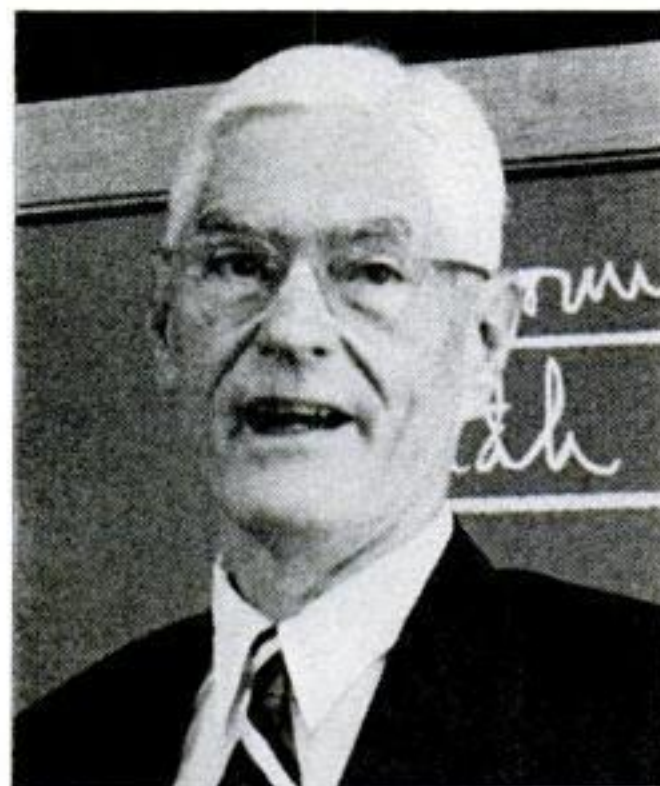
YOUNG EXPERT, Dr. Robert Charpie, 29, teaches at Oak Ridge reactor school, planned initial agenda for Geneva atoms-for-peace conference.



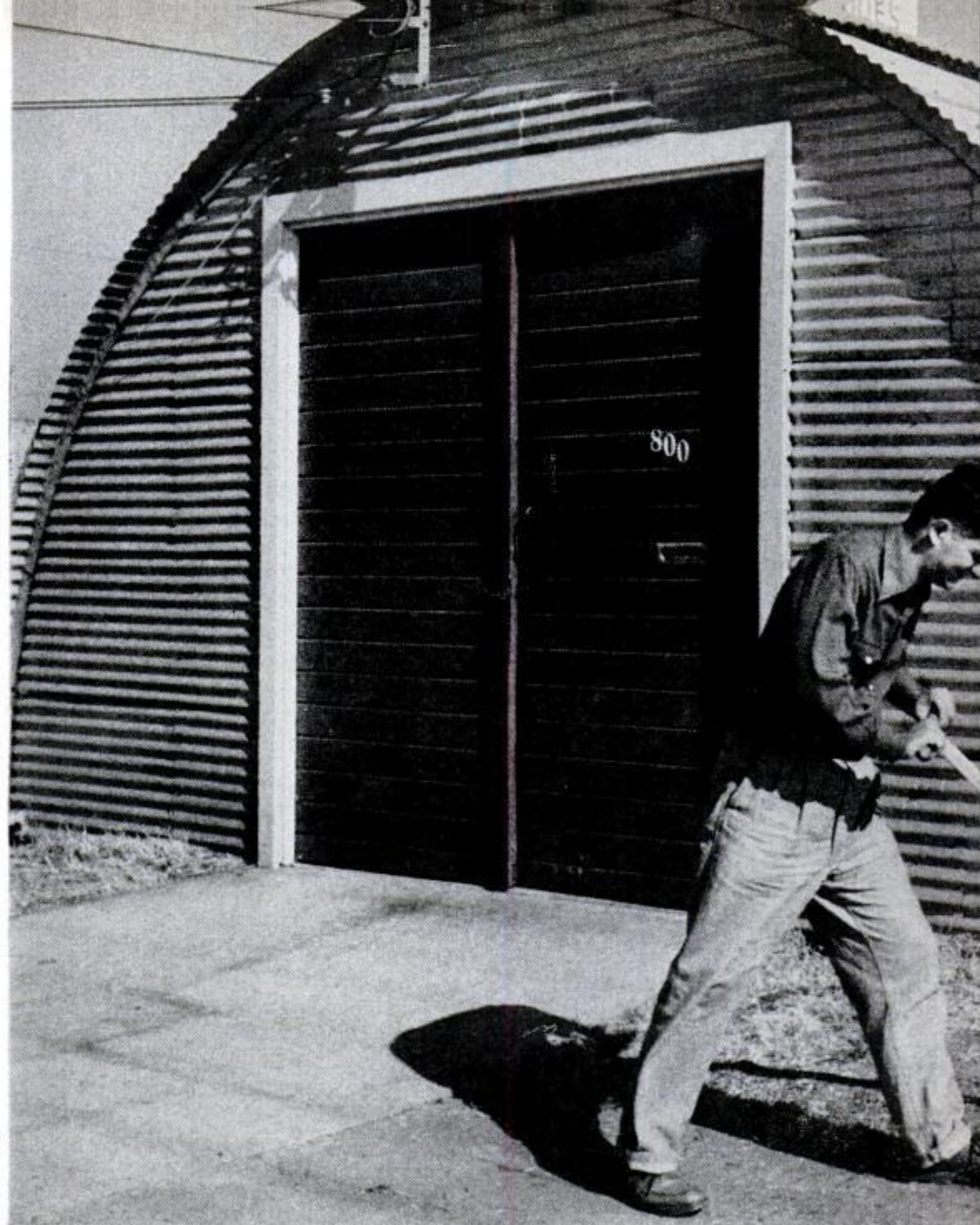
TOP CONSULTANTS are Physicist Dr. Lawrence Hafstad (left), who headed AEC's reactor development, and Lawyer Gordon Dean, ex-AEC chairman. Dean is an atomic adviser to Lehman Bros., investment bankers. Hafstad counsels on atomic investments and will soon become research boss at General Motors.



NEWCOMER, Uranium Prospector Vernon Pick, plans to use millions from famous strike (LIFE, Nov. 1, 1954) to make atomic instruments.



OLD HAND, Industrialist J. Carlton Ward Jr., ex-president of Fairchild Corp., now heads Vitro Corp. which digs uranium, designs reactors.



ATOMIC INDUSTRIALIST David Schwartz still mows the grass around West Berkeley, Calif. Quonset hut which houses his firm, Bio-Rad Corp., even though

BRAINS OF THE ATOMIC FUTURE: OLD HANDS AND YOUNG GENIUSES

SOFTBALL TEAM AT ORSORT (OAK RIDGE SCHOOL OF REACTOR TECHNOLOGY)





he grossed \$100,000 last year. Schwartz worked for an atomic instrument manufacturer before starting Bio-Rad in 1953 to make radiochemical compounds.

The leadership of the atomic industry has been seized by an oddly assorted group of hardheaded veteran businessmen, young geniuses, ex-AEC aides and free-lancing entrepreneurs. Almost all have a sound scholarship in science. Without that even a deep faith in the future of their enterprise would not be enough.

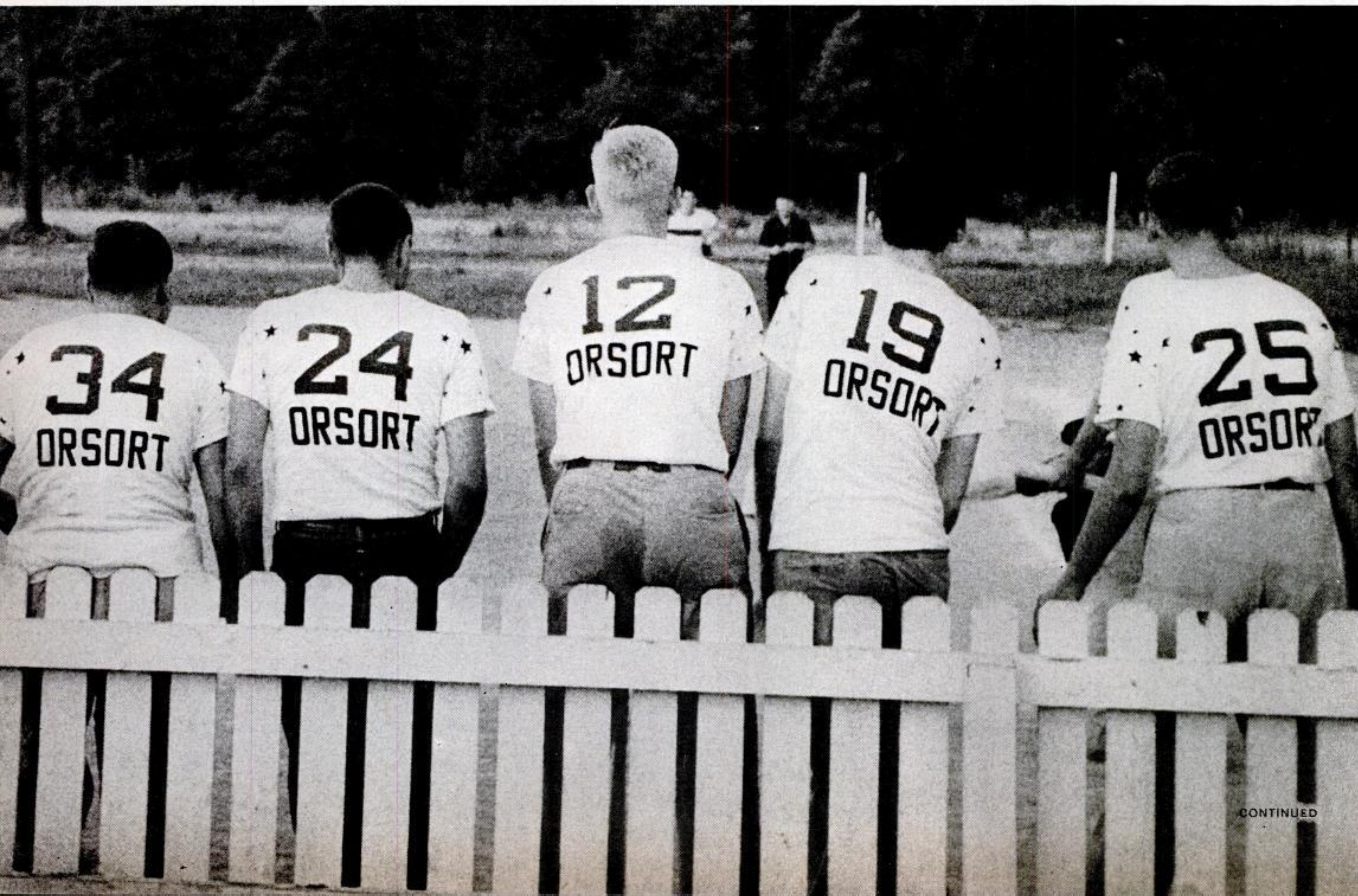
But the expansion of the industry is in danger of being retarded by a



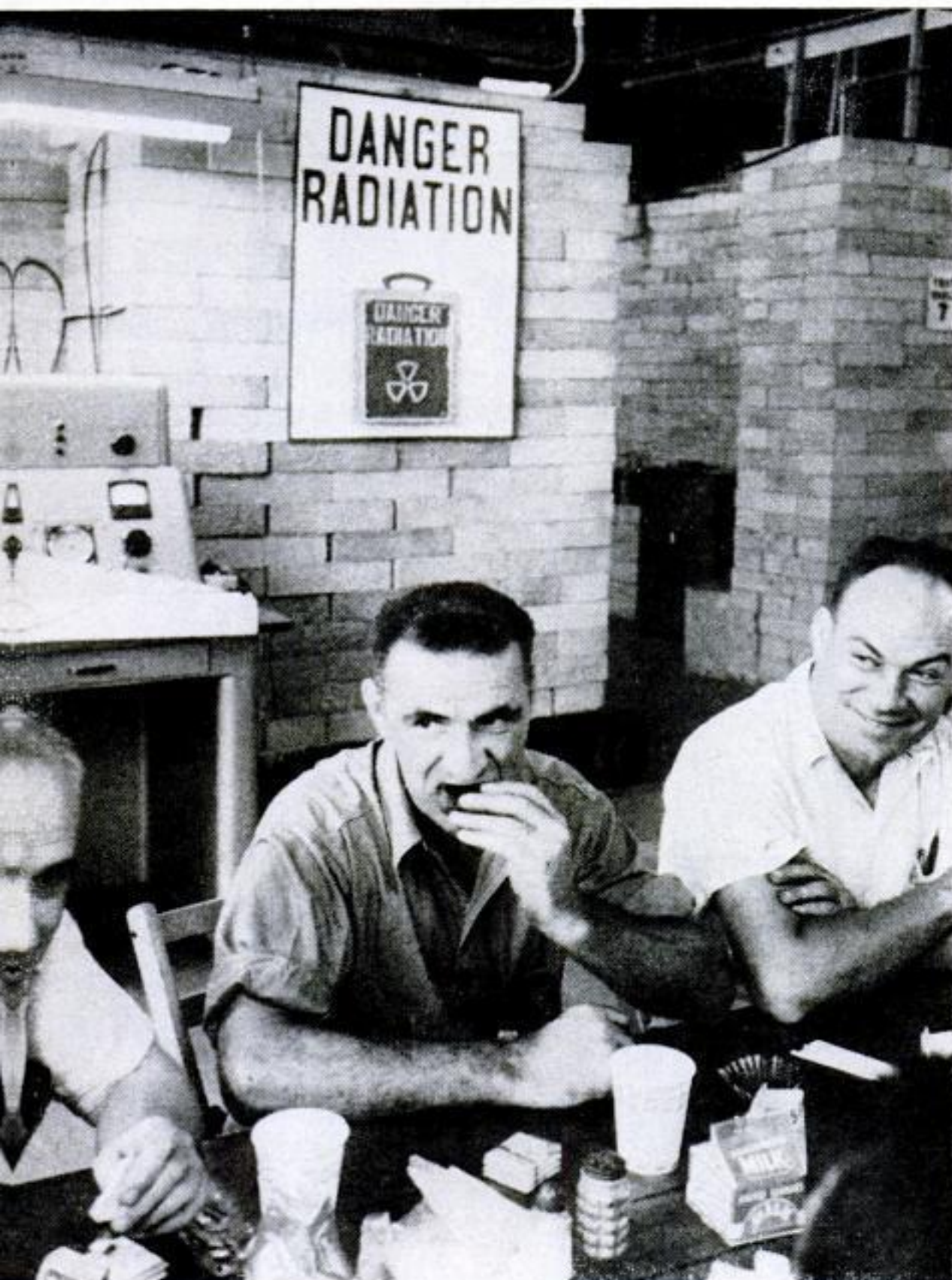
ATOMIC FINANCIERS, Merle Thorpe Jr. (left), Newton Steers Jr., display \$44.5 million worth of atom stock held by their Atomic Development Mutual Fund.

shortage of experts. More than 40 U.S. universities have added courses in nuclear engineering, and Oak Ridge has a five-year-old school for reactor specialists (below). But this year only 250 new nuclear engineers will complete their training. The flow of specialized manpower will have to be drastically stepped up to produce the 15,000 experts who will be needed by 1965 to satisfy the accelerating needs of the new industry (next page).

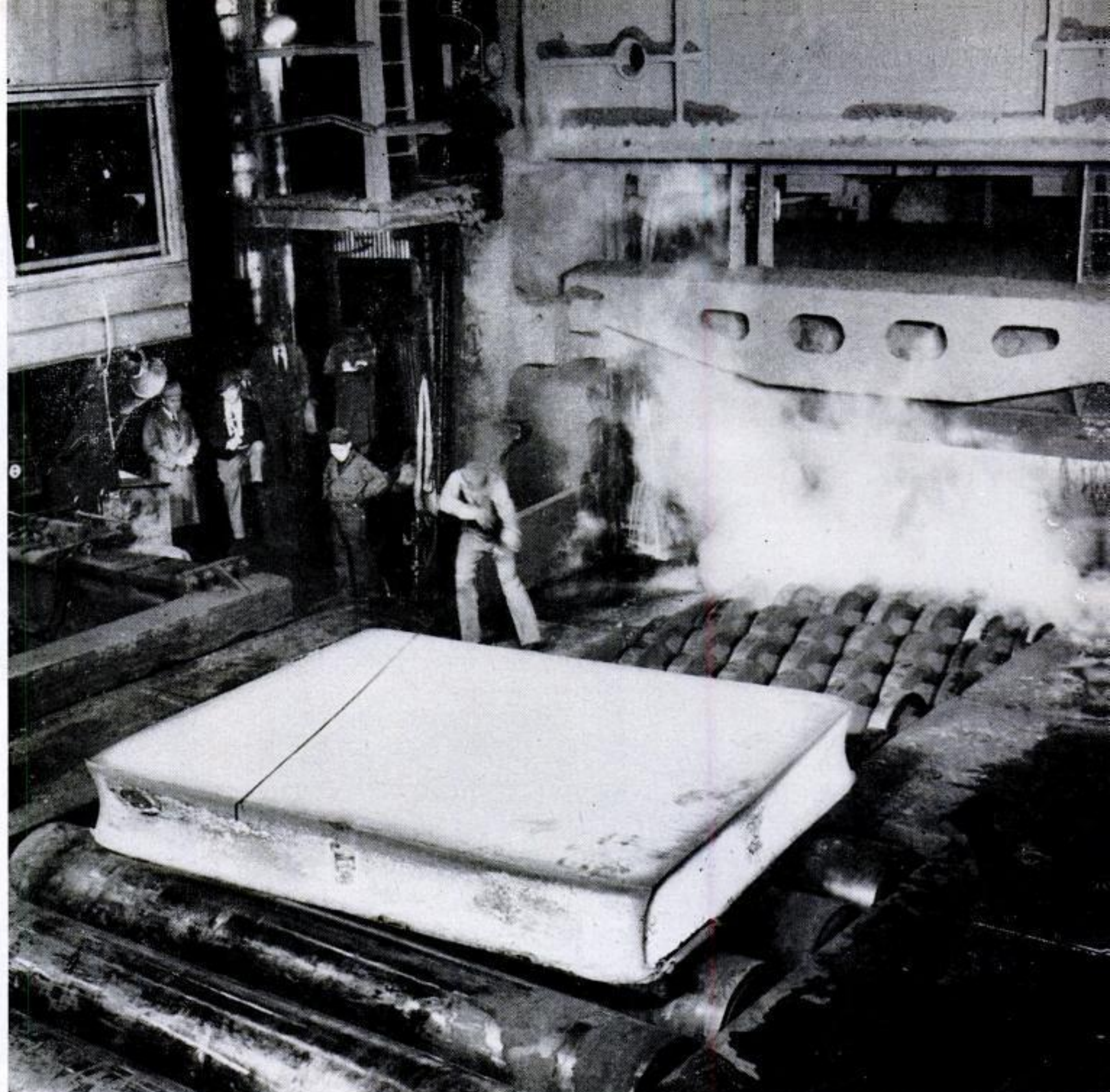
LINES UP FOR EVENING GAME AFTER EIGHT HOURS OF STUDYING REACTORS. STUDENTS ARE HAND-PICKED SCIENTISTS WHO FINISH COURSE IN 50 WEEKS



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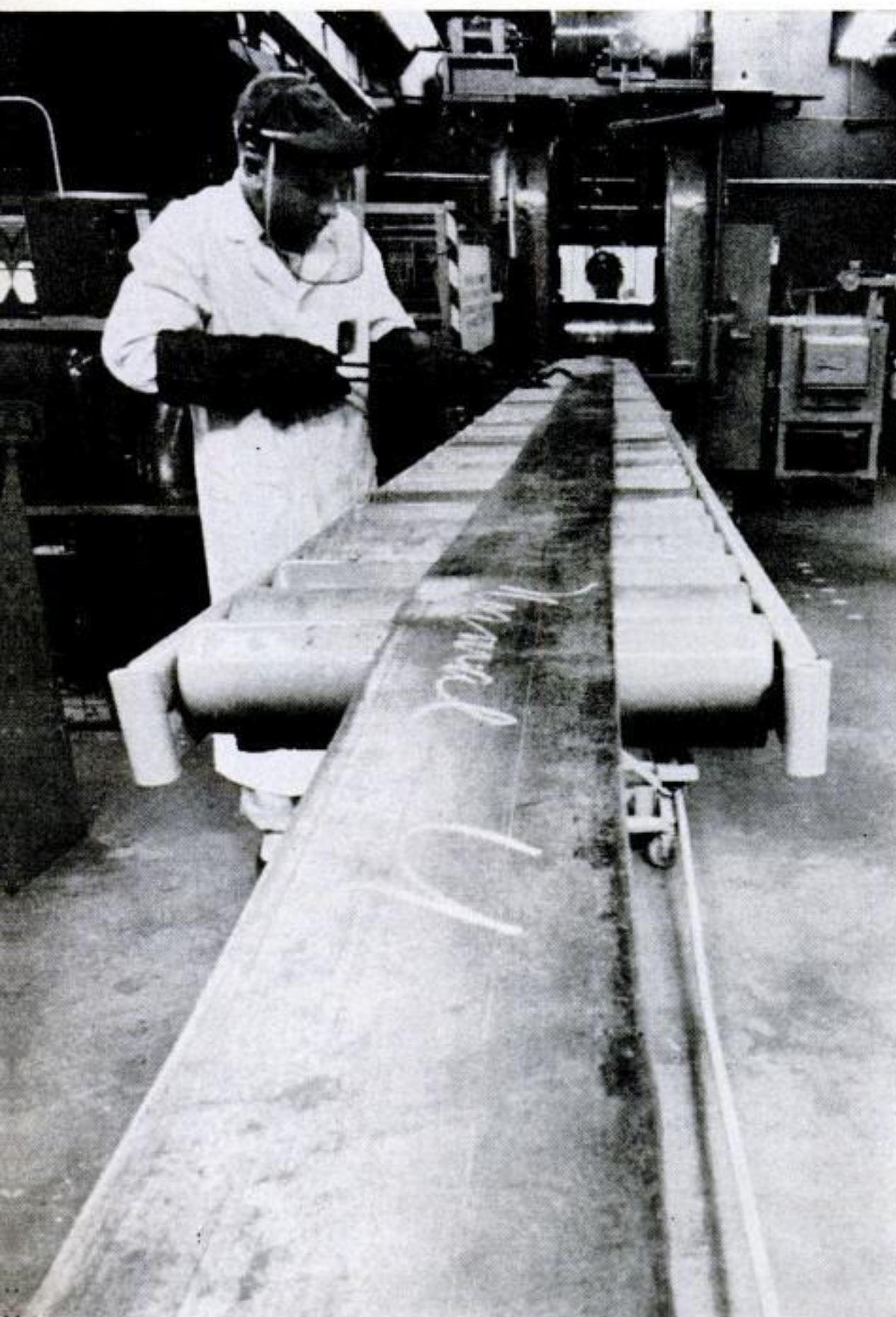


ATOM AGE LUNCH is eaten by workers at High Voltage Engineering Corp. in Cambridge, Mass., who are protected by a 3-foot-thick barrier of concrete from the intense rays of an atomic accelerator.



21-TON STEEL SLAB (above), one of the largest ever rolled, is flattened into thick plate at Lukens Steel Co. plant in Coatesville, Pa. Plate will be shaped into jacket to house uranium in reactor core.

PLASTIC UNIFORM (below) for workers in the atomic industry protects them against radioactive dust. Here suits are inflated in leakage test at Snyder Manufacturing Co. Inc. of New Philadelphia, Ohio.



PURE URANIUM is rolled into long 4-inch-wide strips at the Sylvania Electric Products Inc. mill on Long Island. The metal will be cut up into different lengths to serve as fuel for atomic reactors.



A REPORT ON RED PROGRESS: IT IS IMPRESSIVE

by CHARLES J. V. MURPHY and ARNOLD KRAMISH

The international atomic conference that begins next week in Geneva marks the end of 10 years of mutual silence and suspicion that have separated the ablest scientists of East and West working on some of the greatest scientific developments of our age. The assembled experts will at last start to exchange information on peacetime uses of the atom in industry (*opposite page*), in medicine, biology, agriculture and fundamental science.

Behind the conference lie two dramatic U.S. seizures of initiative: President Eisenhower's December 1953 proposal for a world pool of atomic materials for peacetime purposes, and AEC Chairman Lewis Strauss's April 1954 announcement of the President's proposal for just such a meeting as this one to discuss those uses. Beyond the conference lie prospects of new abundance for backward areas and a new type of competition between Western and Soviet scientists to fill the needs of those areas.

Just how tough that competition will be is one of the main things that the 200 Americans at Geneva will find out. At the Big Four conference Bulganin finally announced Soviet plans for contributing unspecified quantities of fissionable material to the Eisenhower-proposed pool. But this belated gesture of co-operation is no indication that the Soviets do not plan to play for all they are worth or that they do not have the wherewithal to do so.

The first Soviet attempt to steal the Geneva show from the U.S. took place in June. News had leaked out that the central attraction of our elaborate exhibit in Geneva would be a fully working swimming pool reactor, so called because its operating elements are immersed in a pool of water (*LIFE*, July 4). A few days after this news became known a number of distinguished Western scientists were startled to receive invitations to a special session of the Soviet Academy of Sciences on the peaceful uses of atomic energy, with a two-week all-expense tour of the Soviet Union thrown in.

Caught off guard by our plan to show off an actually operating research reactor at Geneva, the Soviet propagandists apparently hoped to diminish the effect by attracting a select audience to Moscow beforehand for a look at their own larger 5,000-kilowatt reactor, whose existence they revealed in June 1954. All that

the outer world knew about this machine, aside from some *Pravda* pictures, was that it was claimed to be the largest yet in use for atomic production of electric power, although still practically a laboratory project compared to our 60,000-kilowatt Shippingport, Pa. plant begun last year and due for completion in 1956, or the six other U.S. atomic power stations now in the advanced planning stage.



CENTRAL ATTRACTION of U.S. display at Geneva atomic parley, pool-type reactor, is looked over by Swiss guides. Physicist Arnold Kramish, co-author of this article, will attend meeting as an observer.

U.S. and British scientists passed up the invitation to the Moscow curtain raiser, but the Soviets went ahead with their show for delegations from the satellites and a sprinkling of technicians from atomic have-not nations. The climax of the Soviet congress was, as expected, a guided visit to the power reactor. But to the extent that it was supposed to steal U.S. thunder at Geneva, the Russian jamboree was pretty much of a flop.

There is no indication whatsoever that the Red performance at Geneva will similarly lay an egg. In fact the indications are just the opposite. In the first place the Soviet Union would never have agreed to participate unless it was pretty confident that its scientific achievements would show up well under the fiercest possible foreign appraisal.

In the second place our scientists have some excellent clues on the Soviet performance and performers. The agenda of the conference will consist mainly of the reading and discussion of technical papers. The titles of these papers and abstracts of what they contain have already been made available to Western scientists working on the conference. Most of them bear such illuminating names as "The Theory of Semi-transparent Nucleus with a Diffuse Boundary," "The Sulphate Method of Separating Plutonium and Neptunium" and "The Theory of Resonance Absorption in Heterogeneous Systems." This gives the newspaper reader some idea of what he will be up against—but it also gives U.S. scientists a good idea of what the Soviets will be up to.

The Russians have submitted 94 papers covering nearly every nonmilitary aspect of atomic energy, from the mining and processing of fissionable material through the construction

and operation of the Soviet power reactor to the use of radioactive isotopes in metallurgy, medicine and agriculture. Assiduous search of the Soviet titles reveals no evidence of the heroic moving of mountains and diverting of rivers which Soviet propaganda once claimed to be the only goal of the U.S.S.R.'s program. Nevertheless American and British scientists have been highly impressed by what they have seen, and they have formed several very respectful judgments on Soviet atomic science:

- ▶ Russian science is successfully matching much of U.S. work in the industrial application of atomic energy, though by no means on so broad a scale.
- ▶ While there are no crucial areas in which the Russians appear to be ahead, there are few in which they seem to be far behind.
- ▶ The Russians are by no means dependent on slavish imitation; on the contrary, they are capable of original and complicated solutions of their own.

All this leaves our own experts in no doubt that the U.S.S.R. now has an impressive cadre of atomic scientists and engineers, well supported by the complicated and extremely expensive facilities and equipment that are the indispensable tools of nuclear development.

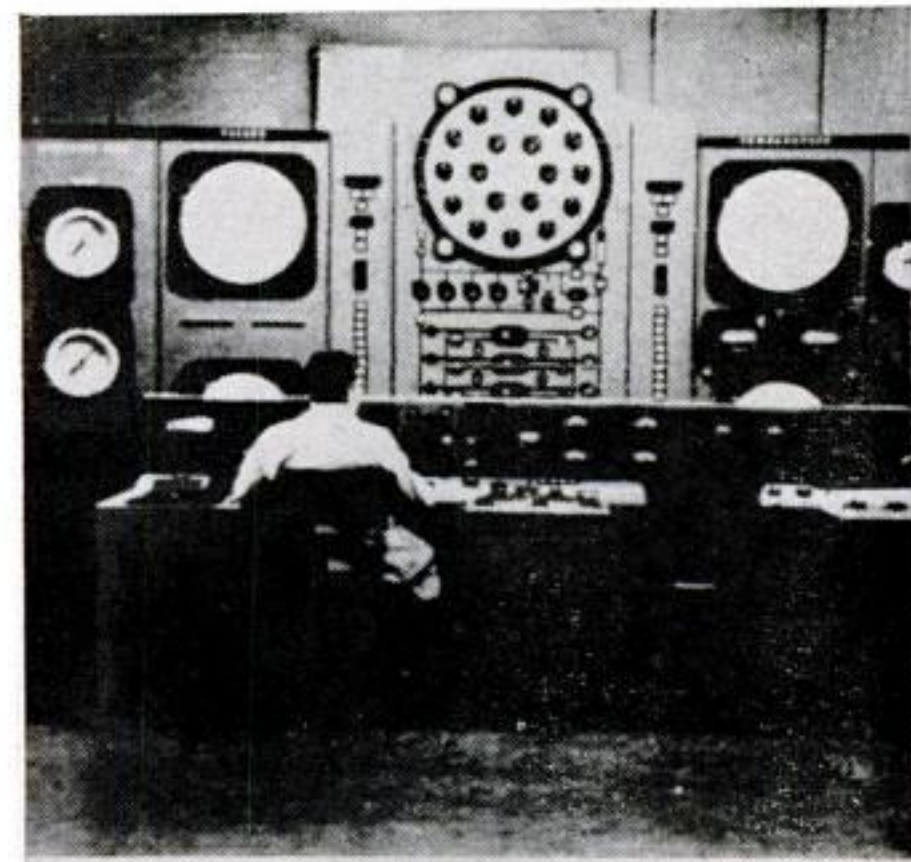
Two other aspects of the Soviet papers fascinate Western scientists. One is the rather surprising discovery that Soviet nuclear science has adopted practically without variation the unique terminology which flowered from the American atomic project. For example, until recently the Russian term for a reactor was *kotel*, which means literally a boiler. Now, however, Soviet scientific literature has universally adopted the word *reaktor*, based on American nomenclature.

Perhaps the most unexpected borrowing is that of the American "barn" as a measurement of the areas of atomic nuclei. This area became important in calculations of the Manhattan Project more than a decade ago. Although infinitesimally small, the experimentally observed nuclear areas seemed surprisingly large to physicists, and a working group facetiously coined the term "barn." The designation stuck, and in mathematical calculations nuclear areas are expressed as so many barns. Now the Soviets have simply transliterated our

CONTINUED



U.S. REACTOR was demonstrated with Eisenhower at controls when he was in Geneva two weeks ago.



RUSSIAN REACTOR near Moscow went into operation with loud fanfare, little explanation, in 1954.

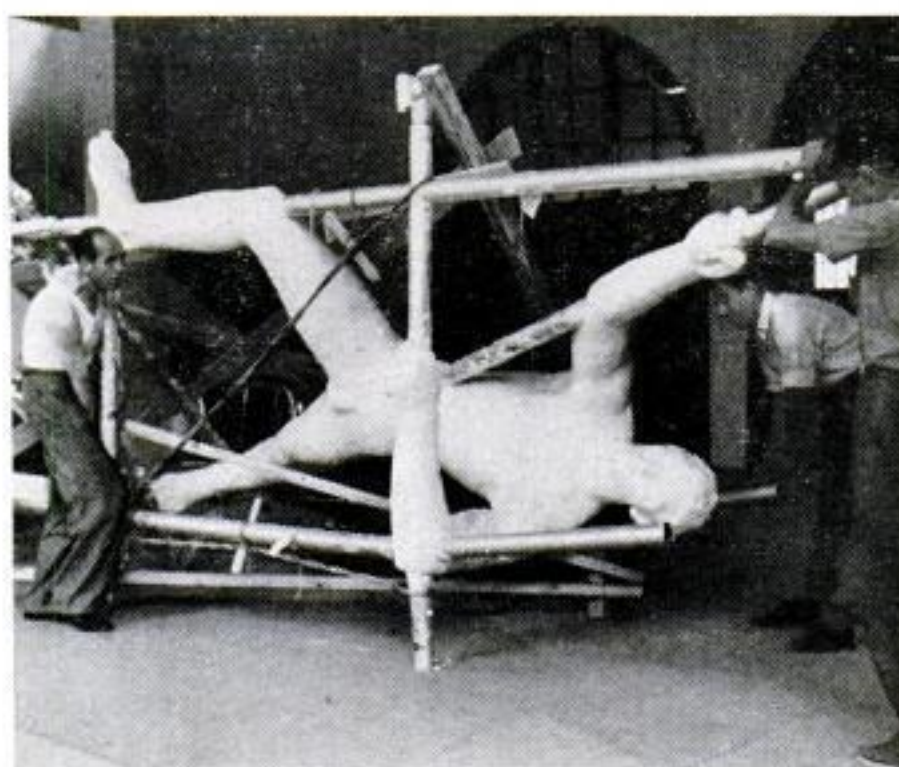
word into their alphabet, probably without even knowing its original meaning. There is no evidence of any similar new Soviet vocabulary celebrating original invention.

The second interesting point about the Soviet papers is that the great majority of their authors' names are unknown to Western science. Whether or not these are the same men who broke the U.S. atomic monopoly in 1949 and crowded the U.S. in the race for the thermonuclear weapon is impossible to judge. Some of them may be younger men who have grown up since the war. It is also quite possible that the compartmentalized Soviet bureaucracy may have conducted its atomic weapons program and its peacetime program with two entirely different teams of scientists.

The older scientists among the Western delegations will, however, encounter some familiar faces and names. Best known, probably, is Dr. Dmitri Skobeltsin, chairman of the Soviet delegation. Skobeltsin is an experimental cosmic ray physicist whose work achieved prominence before the war. After the war he was scientific adviser to the Soviet U.N. delegation which helped to torpedo the Baruch plan for atomic control.

Another prewar personality is Dr. Abram I. Alikhanov, who in the Stalinist past was a professional rival and foe of Skobeltsin in the field of cosmic rays. The controversy between them became almost as intense as that between the contending Soviet schools of geneticists. In 1949 it reached a crescendo, with scornful blasts and counterblasts at opposing experimental techniques and interpretations. Then, without any apparent resolution of the conflict, the furor died down. At Geneva, Alikhanov will discuss the design of nuclear reactors, and presumably he has been shifted to this more practical research.

A third well-known figure in the Soviet delegation is Dr. V. I. Veksler. Veksler's name became known to the West shortly after World War II in the course of a remarkable international scientific exchange. The problem of devising higher energy machines for accelerating nuclear particles and thus probing deeper into the secrets of the atom had concerned American physicists to a degree throughout the war. The cyclotron, prototype tool for such high energy research, had been invented in the early 1930s by an American, Dr. Ernest O. Lawrence at the University of California. In July 1945 one of Lawrence's protégés, Dr. Edwin McMillan, hit upon an ingenious solution for extending the energy range of existing accelerators. His solution was published in this country later that same year in the *Physical*



ATOM AGE FIGURE of an industrial worker, which will be part of the British exhibit, arrives at Geneva.

Review. In February 1946 the editor of that publication was amazed to receive a letter, postmarked Moscow, in which Veksler politely claimed to have anticipated McMillan's ideas by at least a year. Veksler cited three articles in Soviet scientific journals during 1944-45. The ensuing exchange between the Russian and the U.S. physicist was unique in the annals of the cold war for its gallantry and politeness. McMillan said that he was of course unfamiliar with Veksler's work and had reached his conclusions independently but gracefully conceded that "Veksler's discovery of the principle was earlier."

Recent Soviet disclosures about the machine Veksler developed cast another interesting sidelight on the resources of Soviet science. They have announced a gigantic new machine embodying the Veksler-McMillan principles. It is one of the largest in the world, with an output of 680 million electron volts. Our scientists conclude that the Soviets obviously must have a good deal of reserve strength to be able to carry out such a project, which has no immediate usefulness to their military and industrial atomic programs.

The Soviets have also revealed the existence of a hitherto unsuspected new central research headquarters called the Institute of Nuclear Problems. The evidence had been that most of Soviet nuclear research was previously scattered among at least three different institutes, all of them engaged in other branches of physics as well.

As intriguing as the new names that appear on the Soviets' Geneva list are the omissions of notable old ones. Chief among these is that of Peter Kapitza, whose career goes back to the European scientific congresses of the 1920s and who later became director of the Institute

of Physical Problems in Moscow. In 1946 he suddenly dropped out of sight and was variously rumored to be under arrest, in retirement, and the head of all Soviet atomic research. Lately his name has again been hailed with increasing frequency in both newspapers and technical magazines. Recently he was appointed to a commission studying space travel—a subject that exerts a remarkable fascination on the Russians.

Another name remarkably missing from the Geneva list is that of Dr. Igor Kurchatov, who according to the latest listing in the Great Soviet Encyclopedia, most reliable barometer of party favor, appears to be the man most qualified for the title "Comrade Atom." Kurchatov is the first man to be singled out by the Encyclopedia as a major architect of the Soviet atomic program.

Should Kapitza or Kurchatov unexpectedly appear, the effect on our scientists would be just about as dramatic as the inclusion of Marshal Zhukov in the Geneva summit delegation. Only one Soviet scientist could create more of a sensation by showing up: Bruno Pontecorvo. The Italian-born Pontecorvo, who fled across the Iron Curtain from Britain's Harwell atomic laboratory in 1950, recently gave a Moscow press interview in which he revealed that he had become a Soviet citizen and had worked on problems of high energy physics in the same laboratory as Skobeltsin, who will be head of the Soviet delegation. It is not beyond the realm of possibility that Skobeltsin will bring Pontecorvo along for another sensational interview.

Even if Soviet tacticians should not produce Kapitza, Kurchatov or Pontecorvo, there is ample possibility of other surprises. The Russian delegation may be in a position to spring the news of the actual operation of a power reactor much larger than the 5,000-kilowatt one in Moscow. Malenkov boasted in June at Moscow that a Soviet atomic power plant producing from 50,000 to 100,000 kilowatts would soon be in operation.

Recent veiled hints in the Soviet press also suggest that Soviet science is experimenting with means of utilizing thermonuclear energy—the power of the H-bomb—for industrial purposes. Such experiments, if successful, would make another big Geneva headline.

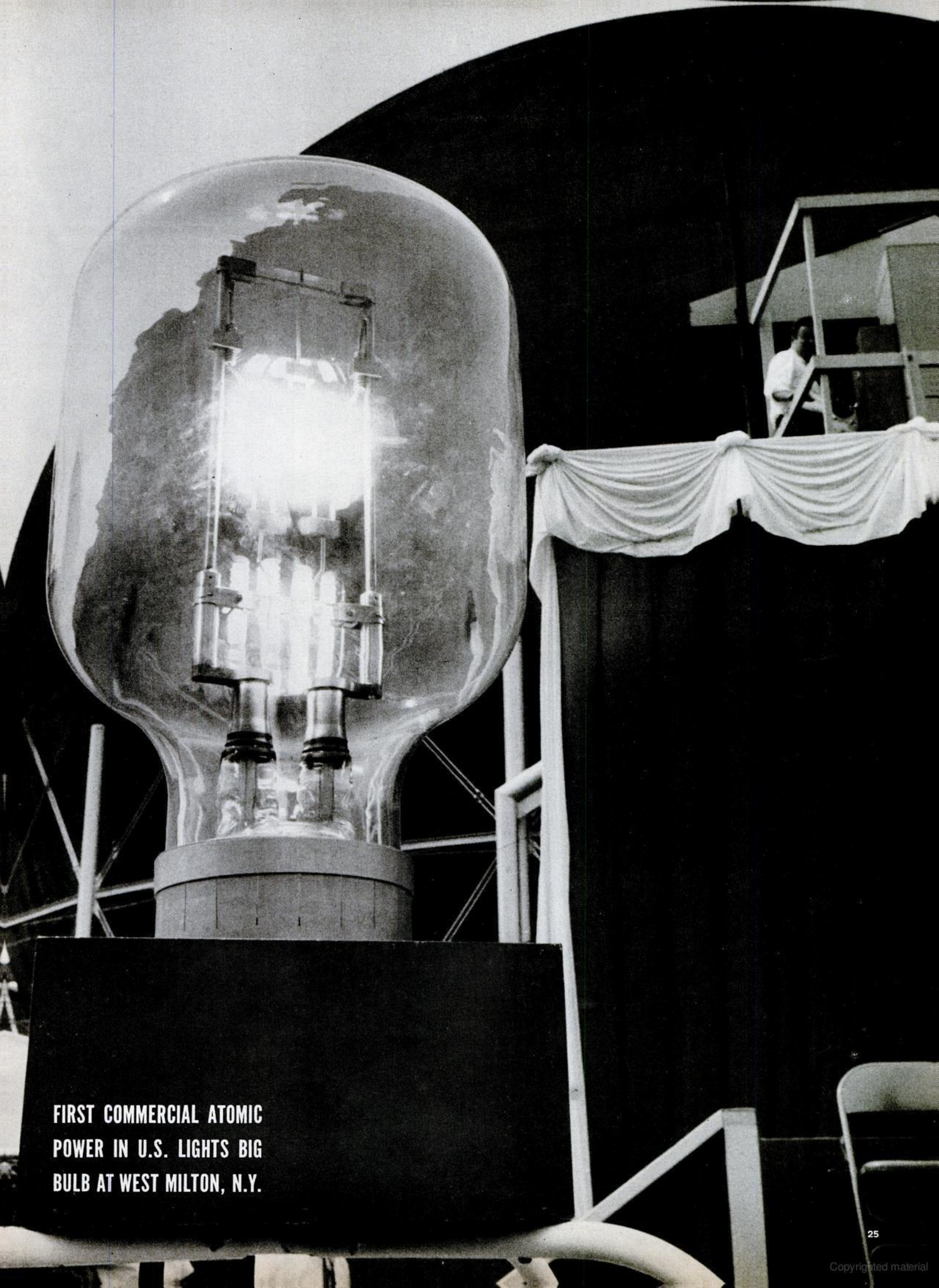
Regardless of these possible Soviet showstoppers, the U.S. presentation at Geneva is not likely to be successfully challenged. Our delegation includes such men as Dr. Lawrence, the cyclotron developer; Dr. Willard F. Libby, whose carbon-14 dating technique has revolutionized the study of man's history; Dr. I. I. Rabi, like Lawrence a Nobel Prize winner; Dr. Hans Bethe, who discovered the secret of thermonuclear energy in the stars; and Dr. Shields Warren, world-renowned expert on biological effects of radioactivity.

But the American atomic case at Geneva will rest on something more than a parade of brilliant personalities. Its solid foundation is the highly concentrated store of information which U.S. scientists and engineers will present to the world. The popular criticism of American security restrictions has quite ignored the fact that the government has made and is continuing to make available to U.S. industry—and all other industry—a vast body of new atomic information. "When we have finished at Geneva," Dr. Libby says, "it is our hope that the rest of the world should be able for the first time to deal adequately and comprehensively with the fundamental scientific and economic problems posed by the atom."



RUSSIAN ATOM EXPERTS include Dmitri Skobeltsin (left), chief Geneva delegate; reactor man

Abram Alikhanov; and Peter Kapitza, veteran scientist whose name is strangely not on the Geneva list.



**FIRST COMMERCIAL ATOMIC
POWER IN U.S. LIGHTS BIG
BULB AT WEST MILTON, N.Y.**



AT WHITE HOUSE satellite plan is announced by (left to right) Dr. Alan Waterman of National Sci-

ence Foundation, Press Secretary James Hagerty, Dr. S. Douglas Cornell and Dr. Alan H. Shapley.

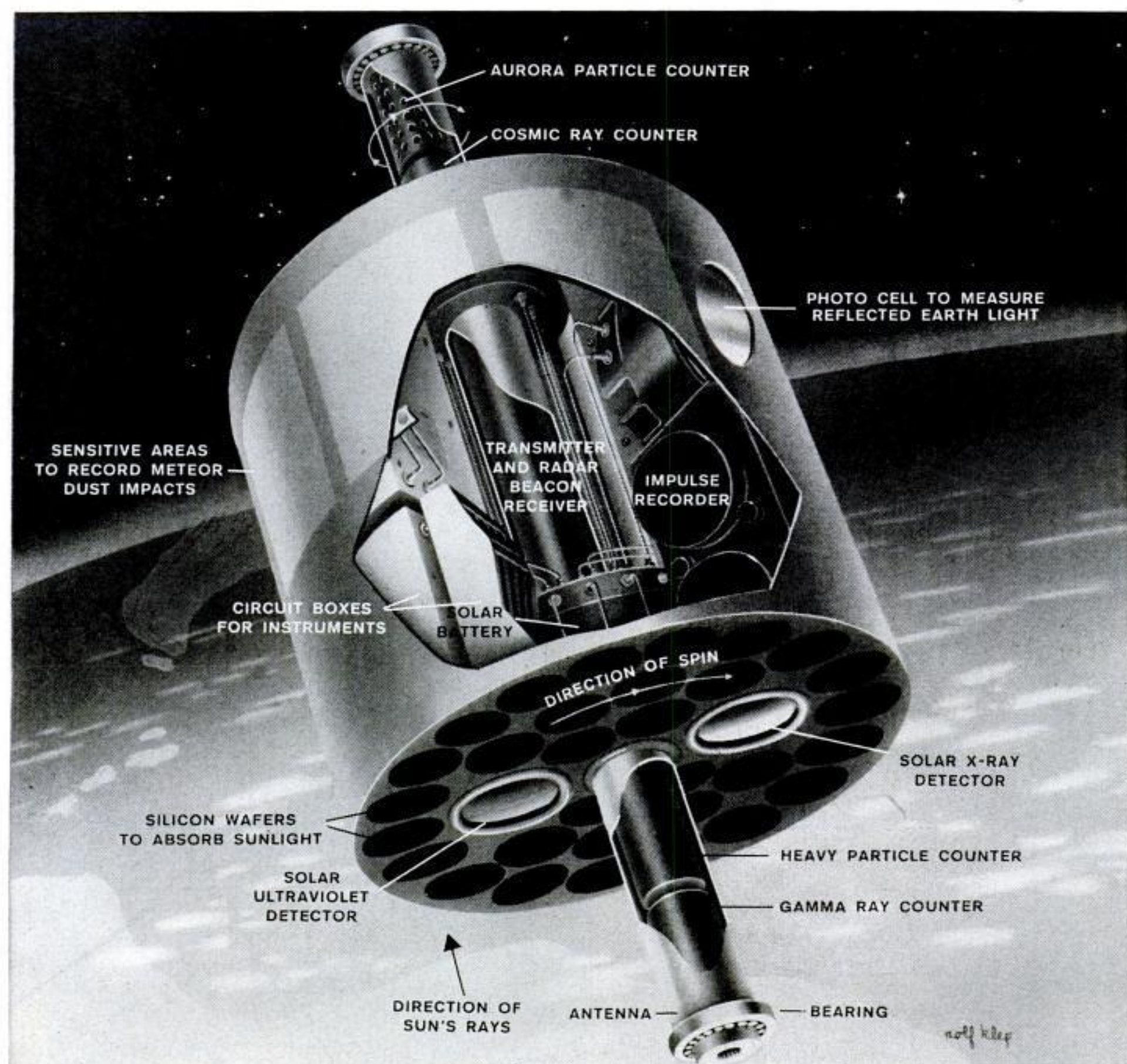
AMERICA'S MAN-MADE MOON

At the White House conference Press Secretary James Hagerty, flanked by a panel of scientists, announced some fantastic news. "... The President has approved plans ... for ... the launching of small, unmanned earth-circling satellites." The first will be rocketed out 200 to 300 miles into space during "International Geophysical Year," July 1957 to December 1958. Its nonmilitary purpose will be to send back data about outer space to be shared with scientists of 40 countries, who during that year will make the most comprehensive study of the earth ever attempted.

Whirling around the earth once every 90 minutes at about 18,000 mph, it is expected to

hold an orbit for days or perhaps weeks before falling back into heavier atmosphere where friction will destroy it. Scientists described the "bird" vaguely but its specifications correspond closely to those of the "MOUSE" (Minimum Orbital Unmanned Satellite of Earth) designed by Dr. Fred Singer which LIFE reported in detail last Jan. 24 (*below*). MOUSE is tiny but as Dr. Athelstan Spilhaus explained, "You want to crawl in space before you fly."

With the President's announcement, an international race to be the first to penetrate space formally began. The next day Russia revealed that it too had plans for its own space satellite—an "automatic cosmic laboratory."



THE MOUSE, which can be either spherical or cylindrical, is shown here as a metal cylinder one foot long and one foot in diameter. The satellite is stabilized so that when spinning through space one end, containing the black silicon wafers that power the small solar battery, always faces the sun.

DEMONSTRATION OF ORBIT the satellite might follow 200 miles above the earth is made with a lighted pointer at Hayden Planetarium against stars as they would look in midsummer. Scientists think the satellite will rarely be visible to the eye but might be seen periodically above horizon at dusk.





FROM THE SUMMIT TO THE STRAIT

ASIA'S PEACE MUST BE DEFENDED—AND A REVOLUTION RECAPTURED AT THE SAME TIME

One reason for the success of the Geneva conference was its avoidance of the problems of Asia. This suited our European allies just fine. They always prefer to ignore Asia when possible. In mid-Geneva, when the free Vietnamese rioted against the Communist bias of the U.N. armistice inspectors (the riot that almost scorched Perle Mesta), France's Premier Faure angrily exclaimed, "Charming fellows!" Sort of like Sir Willoughby Patterne being not at home to the unrepresentable cousin who called during the garden party.

The Europeans are not the only ones who want to forget Asia. The U.S. too has its Europe-firsters, or more exactly its "Atlantic isolationists," as General MacArthur has called them. They include all those who, feeling gingerly, remote or in bad conscience about Asian events, are content to drift with a tide whose alien rhythm and goal seem beyond our influence.

This week the U.S. and Red China begin talks in Geneva that may lead to a meeting between Dulles and Chou En-lai. In those talks the U.S. could yield to the Communists on Quemoy and the Matsus, could give full recognition to Mao, could let Vietnam go Communist and abandon Formosa itself without ruffling these Atlantic isolationists one whit. So before these talks go too far, Americans ought to take another look at this Asian tide. Its drift is not our way.

It started our way, some decades ago, as a genuinely revolutionary tide, carrying China and its neighbors toward political democracy and equality with the West. After World War II this revolution was usurped by Communism and turned into pure tyranny and aggression. It will disturb the peace of Asia until its Communist drift is corrected.

The U.S. has resisted this drift spasmodically, irresolutely and ineffectually. As a result U.S. power and purpose in Asia are doubted throughout free Asia. As a further result every new concession made to Chinese Communism becomes a lever by which Mao Tse-tung, like a modern Archimedes, can pry loose the whole free Asian world. Each little concession is magnified into a big fear that it will be followed by other concessions until all Asia is Red.

Such is the drift. Rather than float further with it the U.S. might almost do better to pull out of Asia altogether and, as earlier isolationists used to say, "let them stew in their own juice." This is the ultimate logic of any concessions to Red China.

The logic of our Geneva *détente* with Russia implies no such concessions. What we reaffirmed at Geneva was a "no-force" doctrine: the U.S. forswears the use of force to change the *status quo*, even those parts of the *status quo* (such as the captivity of Eastern Europe) which we abhor. In Asia we had affirmed this doctrine even before Geneva. We said we would not initiate the use of force against Red China, and our treaty with Chiang Kai-shek states that he won't, either. But we have also said we would resist the use of force by the Reds.

The place where force is now threatened, as it was last winter, is in the Formosa strait, the island specks called Quemoy and the Matsus. Walter Lippmann calls it "an absurdity" that such specks should threaten war. But if the use of force is not resisted there, or anywhere, then the whole "no force" doctrine becomes a far greater absurdity. We have to resist the transfer of people against their will (and why not poll the 50,000 civilians on Quemoy-Matsu?) if we are serious about our peace policy. Unhappily—and this is the weakness of our position—defensive firmness, though essential, is not enough to correct the whole Asian drift.

The U.S. has it in its power to correct this drift. We could influence, at least as much as Russia has, Asia's revolutionary tide. One measure of this unused power is in what we have already failed or omitted to do:

Korea After the truce of 1953 Secretary Dulles promised to make South Korea "the show window of democracy" in Asia. With our help this new-old nation could transcend the handicap of illegal division as dramatically as has West Germany, or at least West Berlin. But it hasn't. Despite some improvement in morale and despite \$900 million in U.S. aid, South Korea is still suffering from inflation, black markets, government corruption, underemployment, lack of housing and the absence of a commercial treaty with either the U.S. or with Japan. As of last week the U.S. had not even secured an honest exchange rate between the dollar and the hwan. Blame it all on stiff-necked Syngman Rhee if you like; it is still a failure of U.S. policy.

SEATO This security pact against Red aggression and infiltration was a Dulles achievement of 1954. It was expected to grow teeth and become an Asian NATO. Last month it had its first test: Laos, formally protected by SEATO, was infiltrated by Red guerrillas and Thailand appealed to the SEATO council for a special meeting. The council, led by Britain and France, refused. In Europe this is as though NATO were to ignore another Communist invasion of Greece.

Economic Progress Congress has just passed a foreign aid bill which includes \$1.2 billion for Asia. Practically all of it is for the defensive shoring up of crisis situations, as in South Vietnam, and means little in the way of forward progress. Yet plans exist in Washington for trade and investment programs that would not only take Japan off the dole but start a new economic era all through free Asia. According to W. W. Rostow, in *An American Policy in Asia*, an additional \$1.3 billion a year could launch these long stagnant economies toward the real fulfillment of Asia's "revolution of expectations." This is the revolution which the Communists exploit to excuse their own tyrannical controls.

Formosa At Bandung, Chou En-lai negotiated a very clever treaty with Indonesia. If it is ratified, the two million Chinese who live there must vote whether to become Indonesian citizens or Red Chinese Nationals; no third option is allowed. The prospect has thrown the whole community of overseas Chinese into a tailspin, especially those who still place their hopes in Formosa. This vote would create an official Red fifth column in Indonesia and crush the Formosan hope.

Formosa, among its many other assets, is a potential source of hope for Chinese everywhere. As it thrives, so thrives the possibility that China has an alternative future to Communism. Formosa cannot keep this lamp burning while its own future remains so precarious. Besides the present military treaty, the U.S. should participate far more closely in Formosa's political and economic development, so that it can become again the voice of the true Asian revolution, keeping the faith until its usurper's hideous experiment has failed beyond all doubt.

These are just four areas in which U.S. Asian policy has been inadequate. Until a full and forward policy is tried, let no man say the drift is irreversible. And until the drift is reversed, let no man expect peace in Asia. Peace does not lie in drift nor in isolationism, Atlantic or other.



Campbell Chicken

all the good meat goes into the soup

From time to time, some pretty good cooks tell us that their homemade chicken soup doesn't seem to taste quite as good as Campbell's. The story behind the wishbone in the picture may help to explain why.

The wishbone belonged to a plump stewing hen. After passing inspection, the hen was cleaned and put in the soup kettle. It simmered there until all the goodness of the meat and bones seeped into the golden broth.

Then *all* the good meat was stripped from the bones—the bright, white meat of the breast, the rich dark meat of the thighs and drumsticks, the light delicate meat of the

back and wings. All the meat.

Finally, the meat was diced and put into each can of Campbell's four different Chicken Soups.

It takes a lot more time and trouble than most busy housewives would care to spare to make chicken soup this way. But it's typical of the care that Campbell takes with every food that comes out of the Campbell Kitchens. So why not leave the work and worry to Campbell and just enjoy the good eating that proves the truth of this Campbell axiom:

"To make the best, begin with the best—then cook with extra care."

"We blend the best with careful pains

In skillful combination,

And every single can contains

Our business reputation."



Campbell's

*Soups • Tomato Juice • Pork & Beans
Tomato Ketchup • V-8 Cocktail Vegetable Juices
Franco-American Products*



IT'S DELICIOUS... 1½ oz.
dry Seagram's Golden Gin over
plenty of ice... add tonic water
and a slice of lemon or lime.

Those who know their
Gin and Tonic like the
Seagram Seabreeze

best of all!

It's America's Perfect Gin and Tonic made only with

SEAGRAM'S GOLDEN GIN

SEAGRAM DISTILLERS COMPANY, NEW YORK CITY. 90 PROOF, DISTILLED DRY GIN, DISTILLED FROM AMERICAN GRAIN

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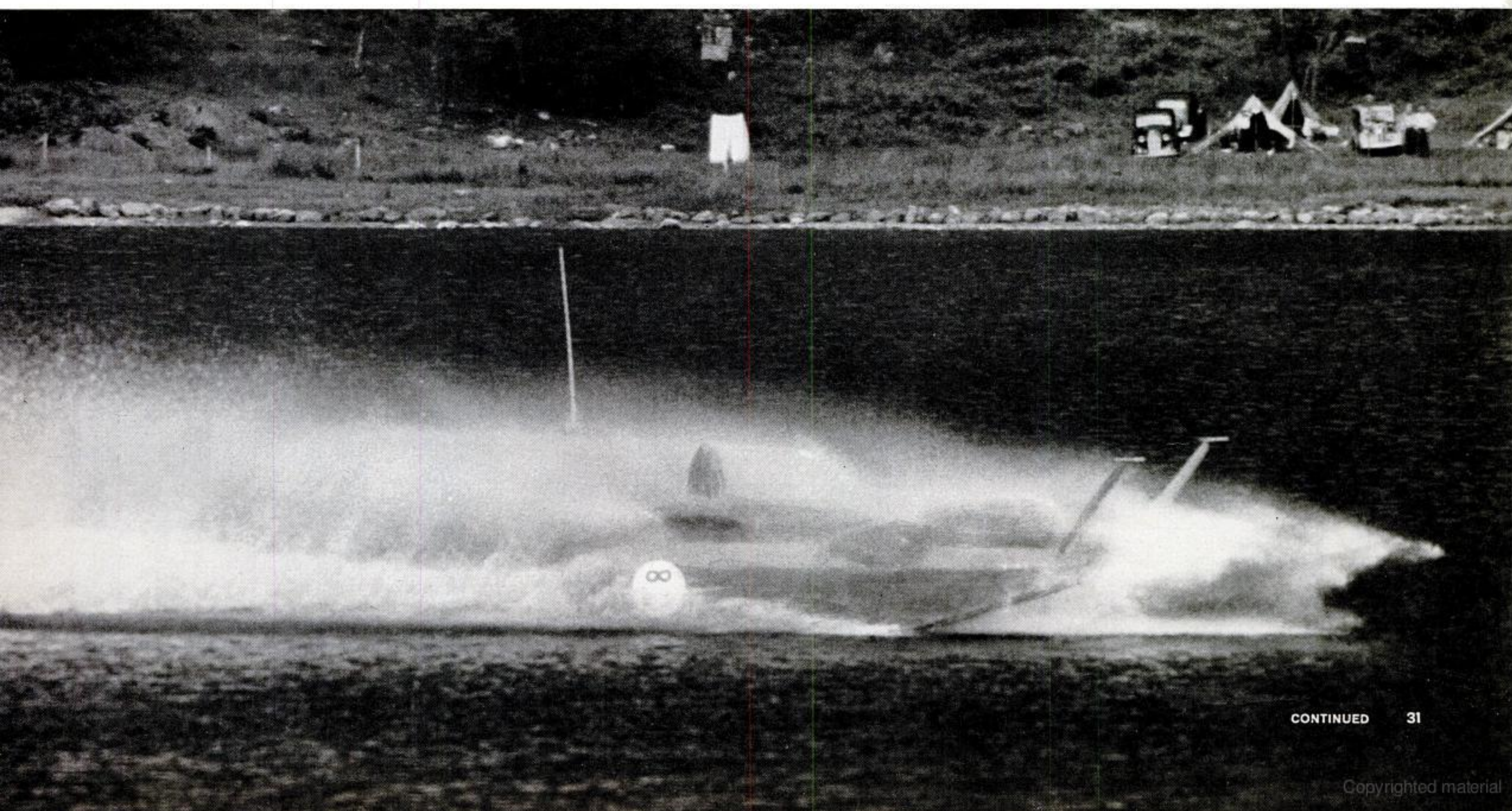
A LOOK AT THE WORLD'S WEEK

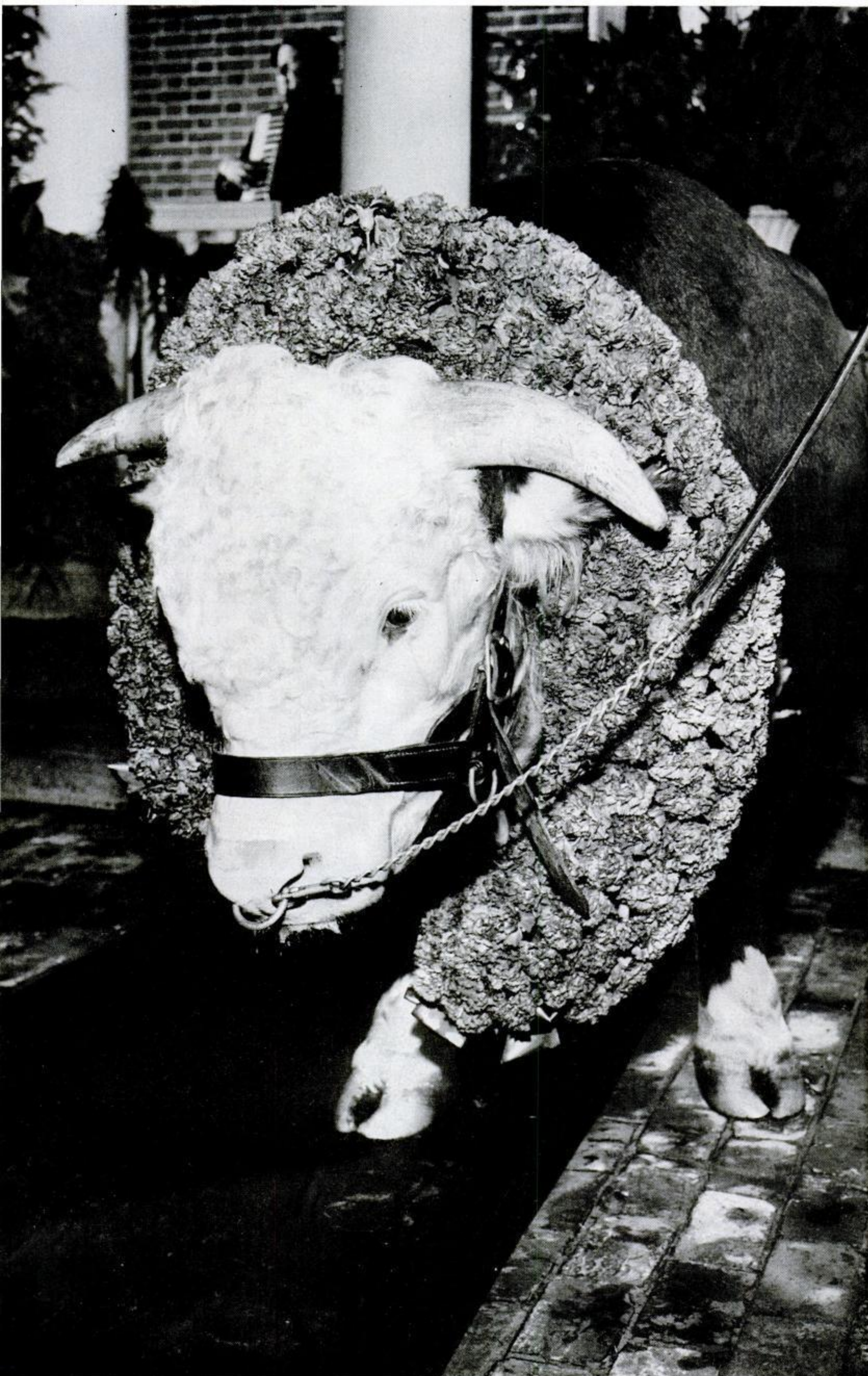
AIRBORNE SAILOR IN NO GREAT HURRY

At a Royal Navy flying show in Ford, Sussex, a helicopter crew has been having fun demonstrating a variation of a serious rescue technique. They equipped a sacked-out sailor with a steering wheel and rudder and then took him for a leisurely sky ride in his own bunk.

JET-DRIVEN BOAT IN GREAT BIG HURRY

Lifting great sheets of spray on England's Lake Ullswater, a jet-propelled monster cracked the "aquatic speed barrier" and set a new record. Earlier Britain's John Cobb and Italy's Mario Verga had been killed when their speedboats, going close to 200 mph, fell apart under the impact of vibrations. Then, after long experimentation (LIFE, April 11), Donald Campbell hit 203.32 mph to win a title his father, the late Sir Malcolm Campbell, once held at 141.74.





FLOWER-STUDDED PARTY FOR IMPORTED BULL

When John Amos, a Nashville, Tenn. farmer, spent \$10,000 to import from England a Hereford bull named Penatok Beau, neighbors were impressed. They sent out gold-engraved invitations and greeted Penatok with trumpet blasts, a red carpet and a huge wreath of carnations.

SLIPPERY CLIMB FOR IMPORTED SALAMI

The Italian *cuccagna* (tree of plenty) is a greased pole hung with hams, provolone and other delicacies free for the reaching. At a fair in the Chicago suburb of Maywood this team used a leapfrog technique but slipped just as it was getting close to a hunk of imported salami.



CONTINUED

Watch "Soldiers of Fortune"! For exciting adventure, see this 7-Up TV show every week.



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How cool can a guy get?

Nothing does it like Seven-Up!



Avoid imitations served from taps or cup-machines. Seven-Up is sold in bottles only

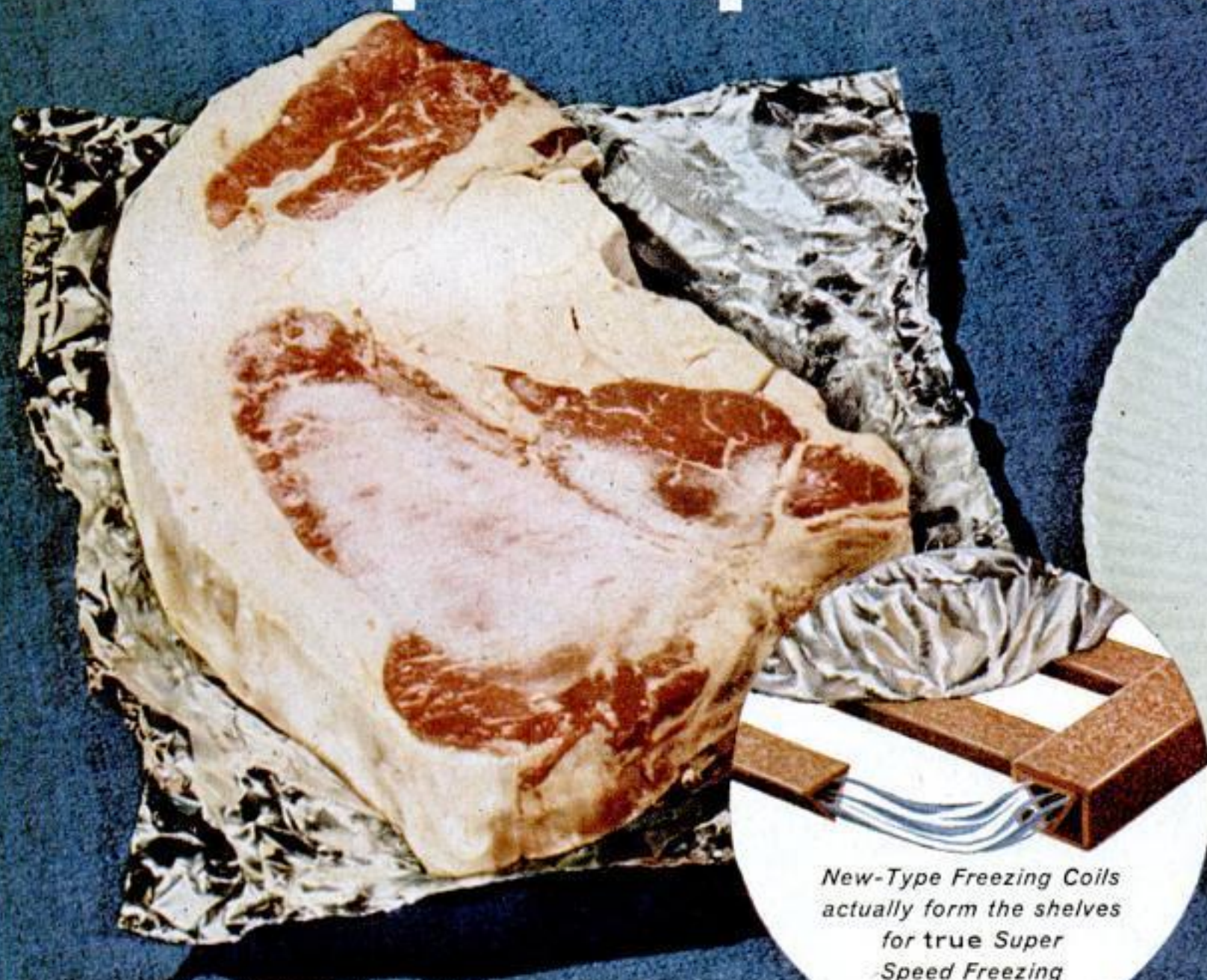
You like it...it likes you!

When summer fun brings on a teen-size thirst, get next to a chilled bottle of sparkling 7-Up. Here's a "real cool" taste for you . . . a c-o-o-l, clean taste that'll make your throat forget it was ever dry.

Tip for teen-age hosts: next party you have, treat the gang to 7-Up. Show 'em you know what's really good.

Hint for the hungry: next time you get yourself a hamburger, have a 7-Up with it. See how 7-Up sharpens your taste. Sip it between bites and that 'burger will taste twice as good. With food—all kinds of food—nothing *does it* like Seven-Up.

Super-Speed Freezing Does It!



New-Type Freezing Coils actually form the shelves for true Super Speed Freezing



Admiral Deluxe Model 14UD49—13.8 cu. ft., 483-lb. capacity

Admiral FREEZERS

Save more natural flavor, color, freshness, nutrition!

Admiral Freezers quick-freeze foods *before* the natural goodness can escape . . . far faster than ordinary freezers!

This Super-Speed Freezing is assured because the freezing coils themselves form all the shelves. They do much more than chill the inside air—they freeze foods *fast* by direct contact . . . allow free circulation of cold air throughout!

Many more wonderful features make Admiral your best freezer buy—such as Glide-Out Frozen Storage Baskets for odd-shaped packages . . . Door Racks that tilt out for easy access to frozen foods . . . Warning Signal Light to guard against blown-out fuses and power failures. Admiral Freezers match famous Admiral Dual-Temp Refrigerators in styling and quality. See them at your Admiral dealers'.

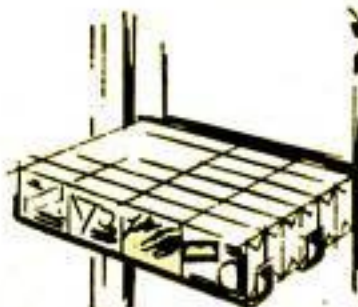
Admiral 10 cu. ft. Freezer prices begin at . . . **\$199⁹⁵**
Ask to see Model 10U35.
Pay as little as \$2.08 a week

Admiral Corporation, CHICAGO 47, ILLINOIS

In Canada: Canadian Admiral, Port Credit, Ontario



Glide-Out Baskets ideal for odd-shaped packages that are hard to store neatly. Slide smoothly in and out on glide rails, even when loaded.



Tilt-Out Door Racks for up to 24 standard frozen food packages. Additional door shelves furnish space for frozen juices and soups.



Chest Models, Too . . . in 13, 17 and 20 cu. ft. sizes—with Separate Fast Freeze and Frozen Storage Compartments, many other advanced features.

5-Year Protection!

Assures long, dependable, care-free operation. *5-Year Food Protection Guarantee* insures owner against food spoilage loss due to operating failure.



POLITICKING IN MALAYA

In the first federal elections in strategic Malaya such politicians as Tengku Abdul Rahman, shown (left) holding an umbrella while conferring with aides in a boat, campaigned up and down the jungle canals. Rahman's Alliance party scored a sweeping success. But potentially more important was the party's composition—a pro-democratic grouping of old political foes, the native Malaysians and the sometimes resented overseas Chinese.



PYROTECHNICS IN SICILY

Europe's tallest volcano, Mt. Etna in Sicily, which has been grumbling and rumbling for a month, finally burped in a brilliant nighttime display. It hurled flame and smoke high into the air and showered down stones and poured lava, worrying villagers who watched last large-scale eruptions force them to evacuate their homes. As the days moved on, the volcano seemed to be subsiding but it was still exploding with regular heavy thuds.



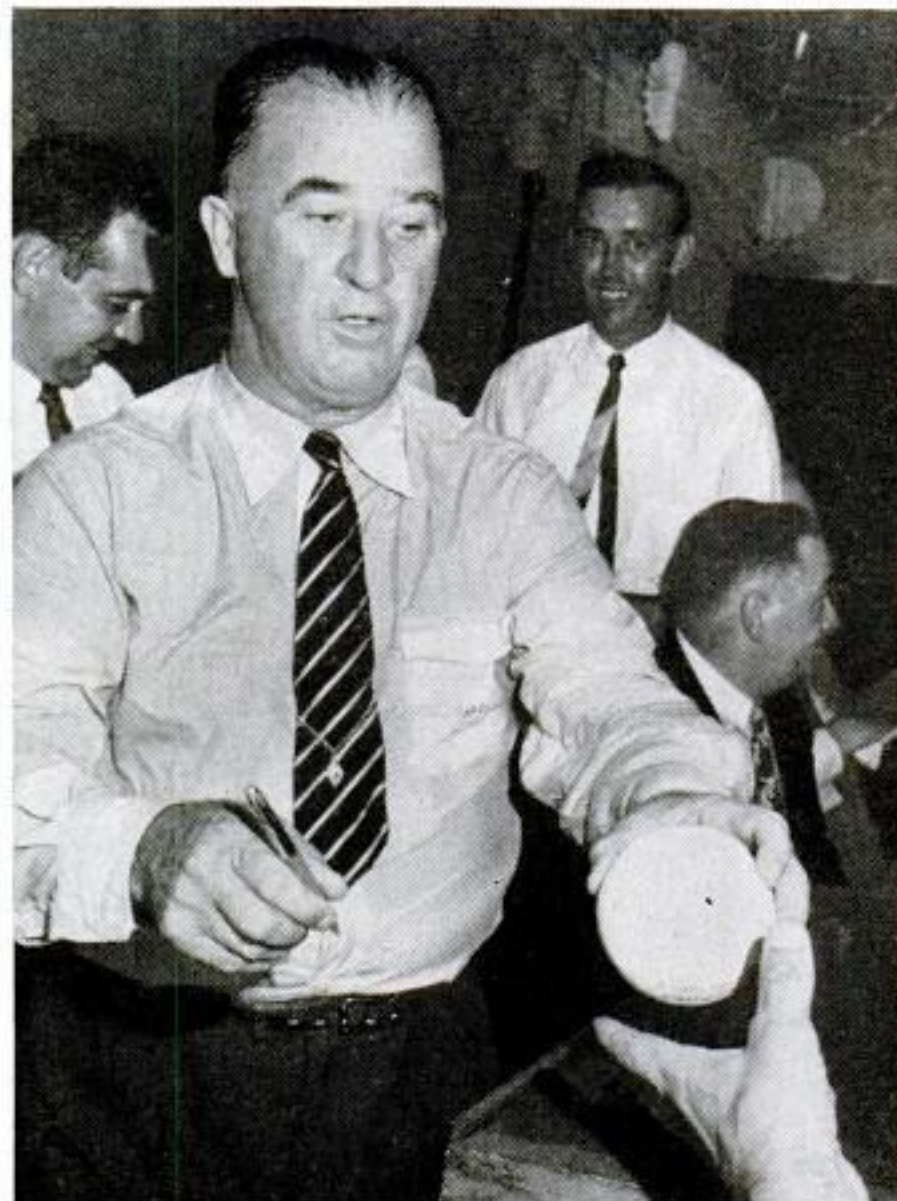
VOICE OF JUSTICE ON A SAN FRANCISCO DOCK

Standing on a pier in San Francisco's harbor, three turncoat GIs—Otho Bell, William A. Cowart and Lewie W. Griggs—listened impassively as an Army military police officer read to them charges of ratting on their fellow war prisoners in Communist camps in Korea. Then they were taken away

and locked up in an Army stockade to await trial. When the Korean fighting ended, the three (and 18 others) refused repatriation. But after a year and a half of disillusioning experience under the Reds they had changed their minds and come home to take their chances in American courts.



GLAD-HANDING, Chandler reaches out to greet a supporter after a speech to 500 at Greenup, Ky.



AUTOGRAPHING, perspiring Happy hands signed ball to a Newport teacher. Temperature was 100°.



LISTENING to a farmer on grounds at Breathitt courthouse, Happy gets a word of encouragement.



KISSING, Happy lavishes attention on a little girl. His hearty campaigning frightened some children.



HUGGING a man who said he voted for him before and will do it again, Chandler shows appreciation.



WAVING, Chandler makes his grand entrance at rally in Greenup, where he made 40-minute speech.



BESTOWING VEHEMENT HUG AND KISS ON CHILD,

HAPPY PAWS THE PUBLIC

But odds are against Chandler
in Kentucky race for governor



HAPPY CHANDLER PLEASURES HER ELDER AT GREENUP, KY. WITH A TIME-HONORED VOTE-GETTING RITUAL

Seemingly out to kiss every Kentucky young'un from Paducah to Paw Paw, and glad-hand all their elders, A. B. ("Happy") Chandler last week was making a spirited attempt at a political comeback. Now 57, the former U.S. senator and baseball commissioner is a candidate in the Aug. 6 Democratic primary for governor—an office he held from 1935 to 1939.

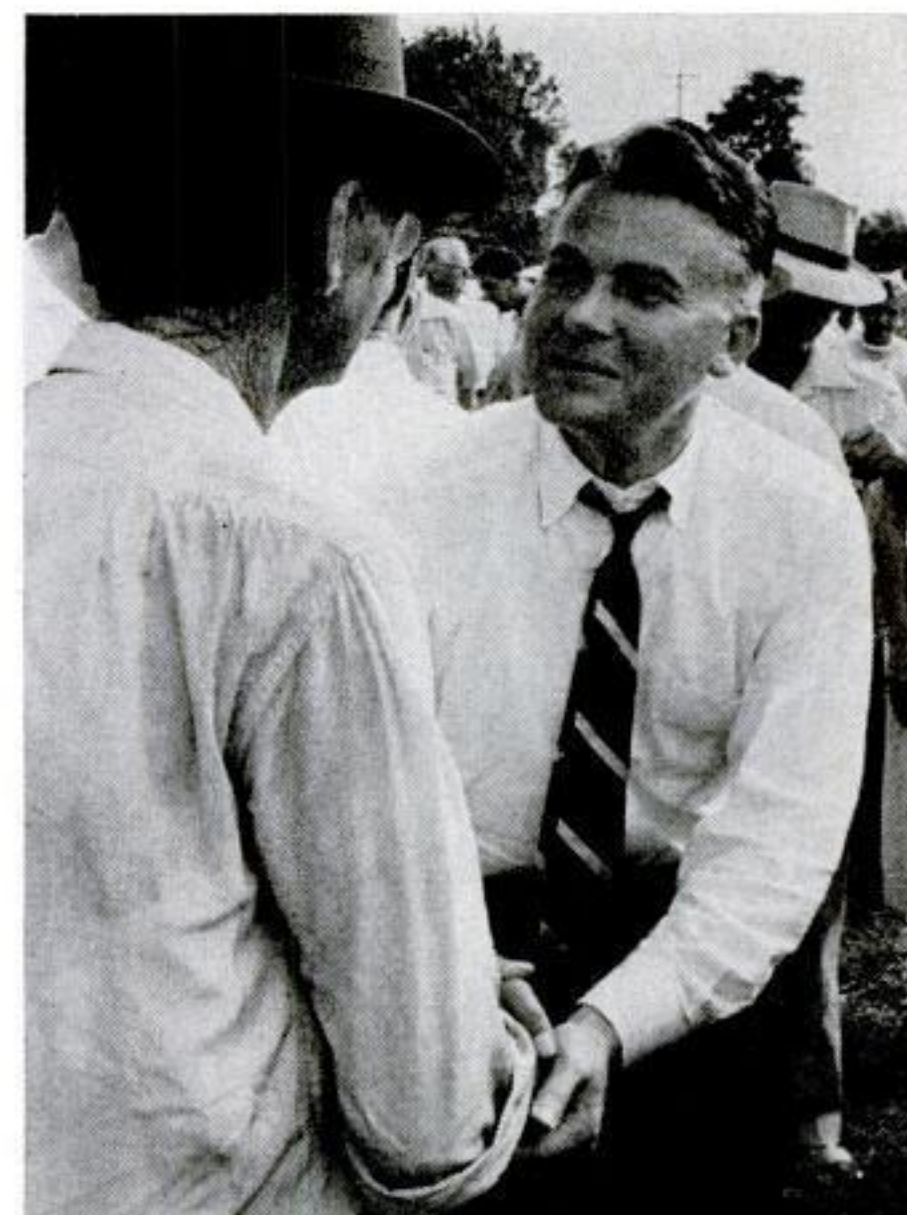
With little organization behind him, Happy was making a highly personal and corny pitch. A sound truck preceded him into every town blaring to the tune of *Clementine* a campaign song that ends: "Everywhere I go-o all I hear is/Happy Chandler, My darling Clementine."

Happy enlivens his speeches by crooning in a throaty tenor such acceptable songs as *My Old Kentucky Home*, and always his sound truck reminds the voter, "Be like your pappy and vote for Happy." A onetime Dixiecrat, Happy even makes a play for the Negro vote by displaying an endorsement he claims was written by Dodger Star Jackie Robinson.

His opponent is a serious, unspectacular former state judge named Bert T. Combs who is supported by Kentucky's political powers—the governor and the state's two senators, ex-Vep Alben Barkley and ex-Governor Earle C. Clements, whose support gives an edge to Combs.



ATTENTIVE, rival candidate Bert T. Combs listens to influential backer in Georgetown at a barbecue.



SERIOUS, Combs shakes hands gravely with T. T. Hedger at Georgetown rally, which 1,800 attended.



PLAYFUL, Combs lifts the hat of Wilson Hayes, a 90-year-old farmer, to see if he still has his hair.



When you wake up

WAKE UP YOUR EYES

with a 2-drop
bath of Murine

As regularly as you reach for your alarm clock, give your sleepy eyes the refreshment of a 2-drop bath of Murine in each eye! They'll greet the new day so much more gladly.

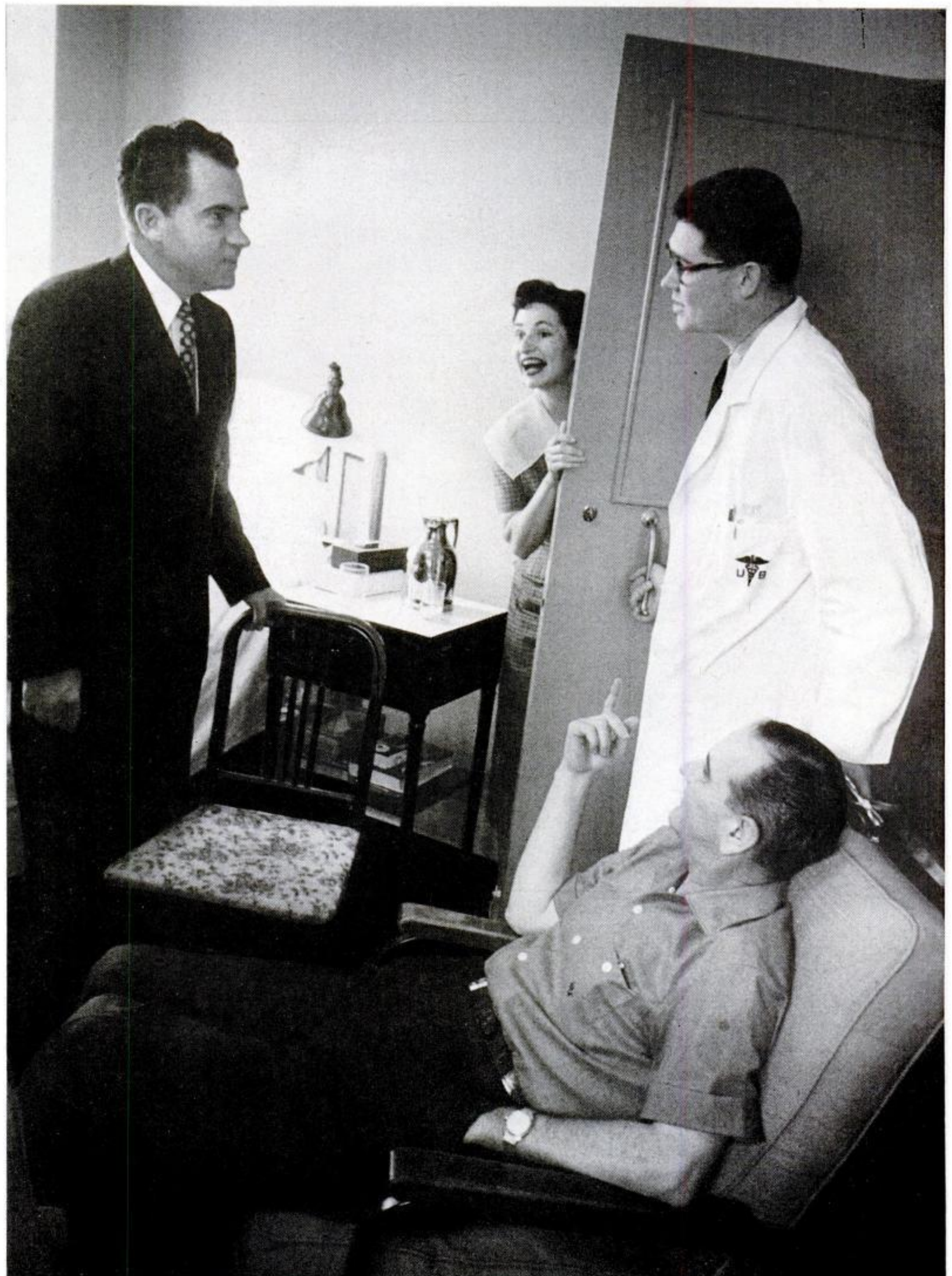
Murine's seven tested ingredients blend perfectly with the natural fluids of the eye. So Murine is as gentle as a tear. And in a matter of seconds it seems to float away morning sleepiness—cools and soothes that feeling of tired eyes during the day—and comforts wakeful eyes at bedtime, so they can welcome sleep more readily.

You can use Murine as often as your eyes would like. And you'll like the pleasant Murine custom of daily, regular 2-drop refreshers. It helps promote a clean, healthful condition. Remember, Murine makes your eyes feel good!

MURINE

for your eyes*

*TRADEMARKS REG. U. S. PAT. OFF.



VICE PRESIDENT NIXON CHATS WITH JOHNSON (SEATED), HIS WIFE AND PHYSICIAN AT BETHESDA NAVAL HOSPITAL

POLITICAL THERAPY FOR A SENATOR

Ailing Lyndon Johnson leaves bed as 84th Congress ends amiable session

Sitting up in a hospital room last week for his first long visit in a month, Lyndon Johnson received therapeutic news. The first session of the Democratic-controlled 84th Congress was ending seven months of unspectacular but fruitful work. It was really Johnson's session. As the Senate majority leader before he was stricken by a severe heart attack, Johnson had skillfully charted a conciliatory course for his party. The Democrats followed it with few detours through the 84th's final days.

Naturally President Eisenhower did not get all he had asked for. But the Administration's foreign

policy was given strong, often overwhelming, support. The 84th approved mutual defense treaties with southeast Asian allies and Nationalist China and voted to keep foreign aid and reciprocal trade.

The President's domestic aims met harder going. A new \$1 minimum wage and an 8% raise for postal workers exceeded his limits. Killed or shelved were bills for school, highway and health programs, a liberalized refugee relief act and a U.S. water resources policy. As Congress closed, Democrats looked forward to a stormier pre-election session and hoped ailing Lyndon Johnson would be ready to lead them.

Naturally—
the best lemonade
comes from
Sunkist

Can't you almost taste it?

These thirsty days there's nothing quite so *cooling* as a big glass of lemonade. And when it's Sunkist Frozen Lemonade you know it's the very finest.

The Sunkist growers make it up themselves. They use their own juicy California lemons and control the processing every step of the way in their own new plant out in lemon country.

The result is *delicious*—a tangy, refreshing flavor that cools you off and perks you up! Plus all the wholesome goodness of a *natural* fruit drink with vitamin C. It's so good—and so good for you! Sunkist Quick-Frozen Lemonade—naturally the *best*!

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Quick-Frozen
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*The most
refreshing drink of all!*





For People of Inherent Good Taste

Here, an inviting full half gallon of the nation's most distinguished Bourbon—in today's most impressive container—
OLD KENTUCKY TAVERN IN THE NEW CAPTAIN'S DECANTER
 Originally designed for service aboard ship—broad in the beam,
 big at the base, Bunyanesque in capacity—the Captain's Decanter
 now graces patio, den, club and restaurant with distinction,
 is offered wherever half gallon sales are legal.
 And the whiskey is that incomparable sour mash Bourbon—
 Kentucky Tavern—the standard of good taste for three generations.

GLENMORE DISTILLERIES Company.
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LAST RITES FOR A STATESMAN

Cordell Hull is survived by 'great gifts' of 12-year secretaryship

The man Franklin Roosevelt called "the father of the U.N." was born 83 years ago in a log cabin in Tennessee's Cumberland Mountains ("The Hulls of Tennessee," LIFE, March 18, 1940), the son of a lumberman who lost an eye in a gun fight and then killed the man who shot him. Cordell Hull grew up in the rough frontier climate which also produced World War I hero Alvin York. He studied law for a year, passed the Tennessee bar and at 22 won election to the state legislature. In 1907 he went to Congress and except for one term held his seat until 1930, when he was elected to the Senate. Two years later Roosevelt named him Secretary of

State, a job he held for 12 chaotic years—longer than any other man.

Last week, in what Hull had requested should be the "simplest ceremony possible," Washington's Episcopal Bishop Angus Dun stood at the foot of the Tennessee statesman's coffin and gave thanks for "the good gifts vouchsafed to us in the life of this Thy servant." In addition to his key role in shaping the United Nations, Cordell Hull's "good gifts" included the Good Neighbor policy toward Latin America and the reciprocal trade program. On the day of his funeral these gifts were still dominant influences in U.S. policy.



HULL'S FRIEND, Secretary Dulles, is shown with him in 1953. He also visited Hull yearly on birthday.

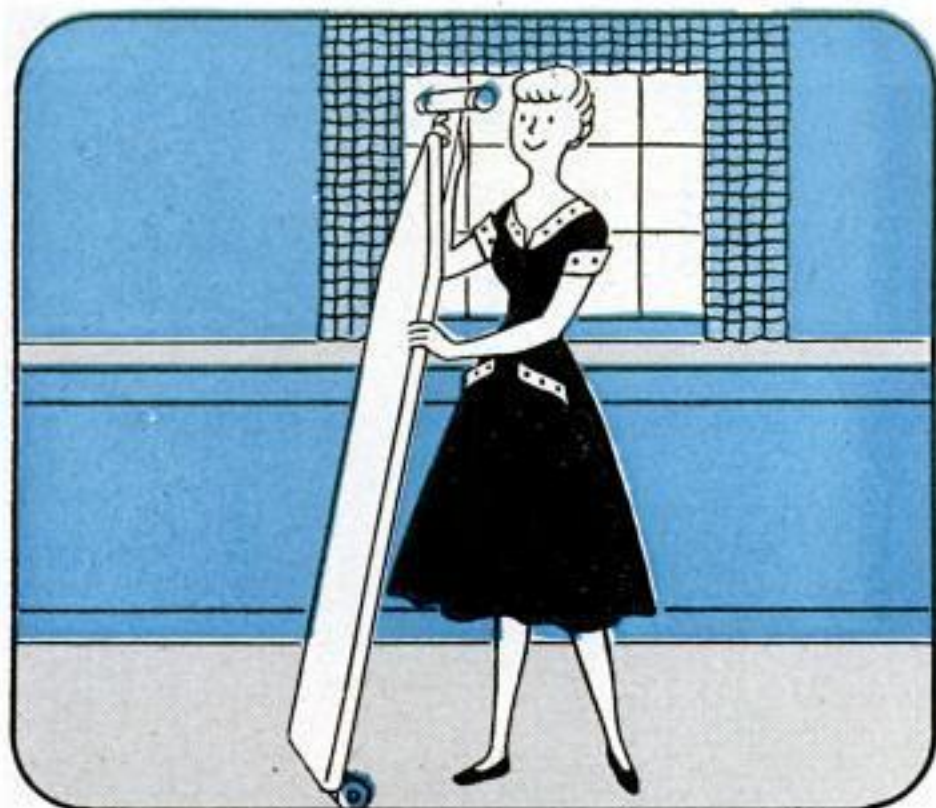


HULL'S MOURNERS, 2,000 of whom attended funeral in Washington's National Cathedral, included (lower right) Secretary of State Dulles, former Secretary Dean Acheson and Commander Edward L. Beach, personal representative of

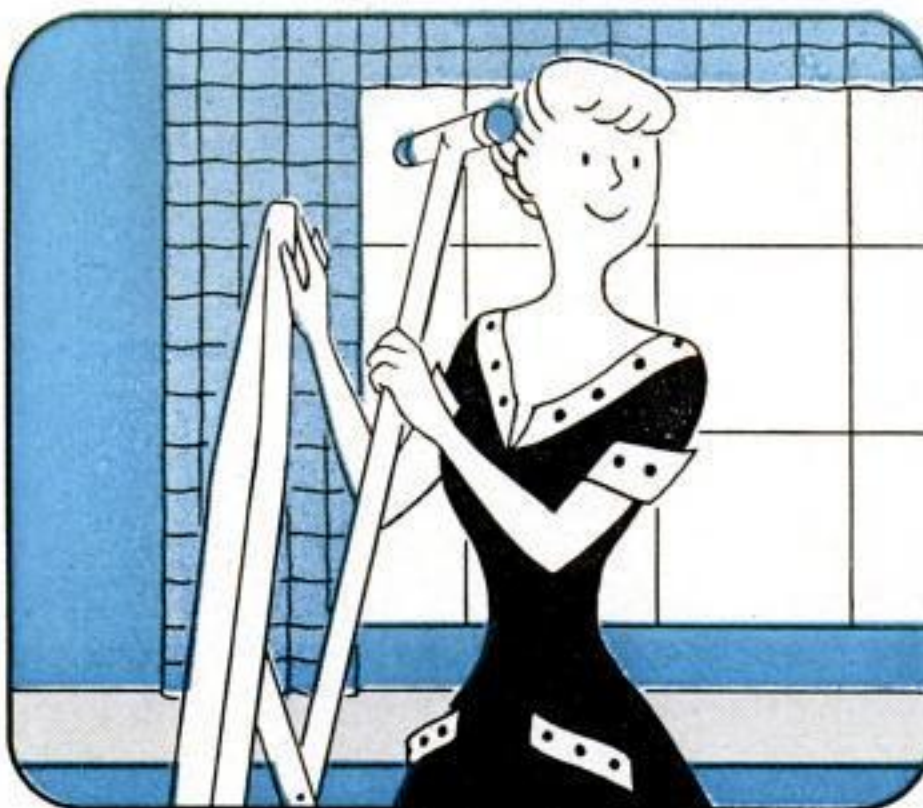
President Eisenhower. Across the aisle from Dulles are old family friends and members of the diplomatic corps. A Tennessee delegation is seated in background (center of picture), headed by Governor Frank Clement, in front row on the aisle.

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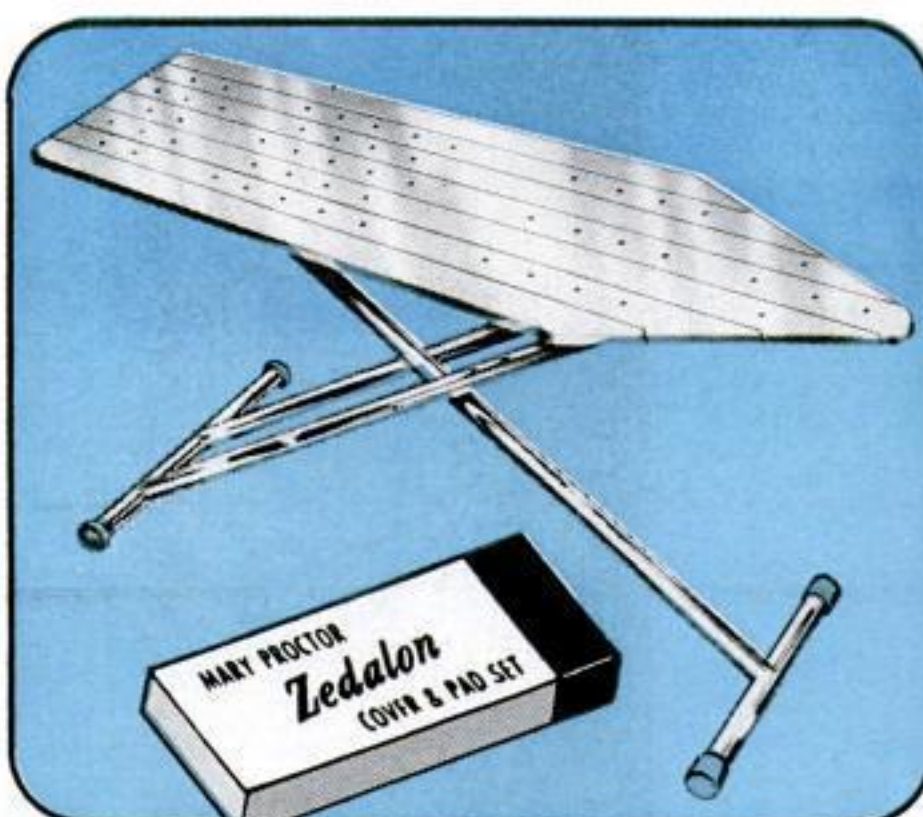


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HORSEFLY'S BANDED EYES, SHOWN MAGNIFIED 60 TIMES, ARE MADE UP OF THOUSANDS OF FACETS, EACH TRANSMITTING A SEGMENT OF THE OBJECT SEEN

THE WORLD OF THE INSECTS

It is filled by an endlessly adaptable, enormously successful form of life

The insects, some 750,000 species of them, swarm over the earth from arctic to equator and surround man everywhere. The world of insects, in which the creatures survive in myriad marvelous ways, is a minute one and man can see it only when it is enlarged—as are the eyes of the hungry horsefly above. On these pages, LIFE presents a view of man's buzzing, drumming, snapping, stinging, jumping, diving, flying neighbors whose activity hums more busily than ever now in summertime.

Arising wingless over 300 million years ago, insects were flying long before reptiles and birds. Faced with airborne predators, many evolved the process of complete metamorphosis by which they spend most of their

lives as inconspicuous larvae before taking flight to mate. They have increased survival chances by a phenomenal reproduction rate, which if unchecked for a summer could choke solidly all the earth's atmosphere.

But only the details of insect life can reveal their true adaptability. Predators like the horsefly have eyes which detect motion more readily than man. Insects have mouths adapted for chewing, biting, piercing, sucking, siphoning or lapping. To protect themselves some mimic their environment or excrete malodorous fluids and gases. Possessing true wings instead of feathered forelimbs, which bird wings are, they can fly and maneuver with an agility unmatched by any other living creature.

CONTINUED



SIMPLE METAMORPHOSIS begins as newly hatched stink bugs, named for the malodorous fluid they secrete to deter their enemies, leave their muglike eggs.



SHEDDING ITS SKIN, now outgrown, a cabbage stink bug emerges after molting. Soft and pale, new skin soon hardens and darkens to same colors as before.



ONE MOLT LATER nymph has almost doubled its size but it still resembles the newly hatched bug. After two more molts it will acquire the wings of an adult.



TENDING THEIR COLONY, adult paper wasps, their queen at top, move among the paper cells which they have formed from chewed-up wood. In the upper cells

INGENIOUS WAYS

In their struggle for survival, insects have evolved wonderfully ingenious ways of growing up. Among most species, the female deposits eggs near a food supply, leaving them to hatch on their own. A few insect parents remain with the eggs and even feed their young during the early stages of growth. The most highly developed insects, the social ants, bees and wasps, care for their young and for one another all season long.

However they are born and cared for, insects mature in one of three ways. The most primitive hatch from their eggs as tiny replicas of their parents. As they grow they must repeatedly shed their hard skins or shells for new, larger ones. Swelling and splitting the old shells, they emerge clad in a soft new one which soon hardens and darkens. To reach maturity, some such insects may undergo this molting process as many



are tiny eggs. At the right is a larva, which hangs head down and is fed regurgitated food. The larvae who are pupating have spun silken caps over their cells.



COMPLETE METAMORPHOSIS begins as lacewing eggs, on stalks formed by female from sticky fluid, yield larvae that would eat each other if not separated.



COVERED WITH CADAVERS of the insects it has killed, a lacewing larva sucks the juice from an aphid. It hangs the corpses on its hairy back for camouflage.



EQUIPPED WITH WINGS, the lacewing becomes adult after complete metamorphosis in which the larva has spun cocoon, pupated, then emerged with wings.

OF GROWING UP

as 40 times. Others undergo what is called a simple metamorphosis, a process of change in which the eggs yield nymphs that also look like miniatures of the adults, but which ultimately acquire wings.

In the highest form of development, complete metamorphosis, young bear no resemblance to their parents. Emerging as wingless larvae, they grow and may even molt. When growth is complete, the larva enters a period called pupation, often spinning a cocoon. During pupation, drastic changes take place. Completely new organs spring from nests of cells called imaginal buds. Many of the larval organs dissolve, their remains providing food for building the new adult organs. Then, shedding its pupal covering, the winged adult emerges, hangs helpless until its wings expand and dry, and then flies off to mate and begin the cycle once more.

CONTINUED

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CONSPICUOUS RED HEAD of the tussock moth caterpillar advertises its presence to insectivorous birds and animals. But once stung by the collar of white

hairs surrounding the head and body, a predator usually remembers the caterpillar's striking appearance and avoids a second attempt to make a meal of it.



PROTECTIVE SPITTLE HOUSE, which shields it against the hot sun and conceals it from its predators, is secreted by a frog hopper as it prepares to feed.

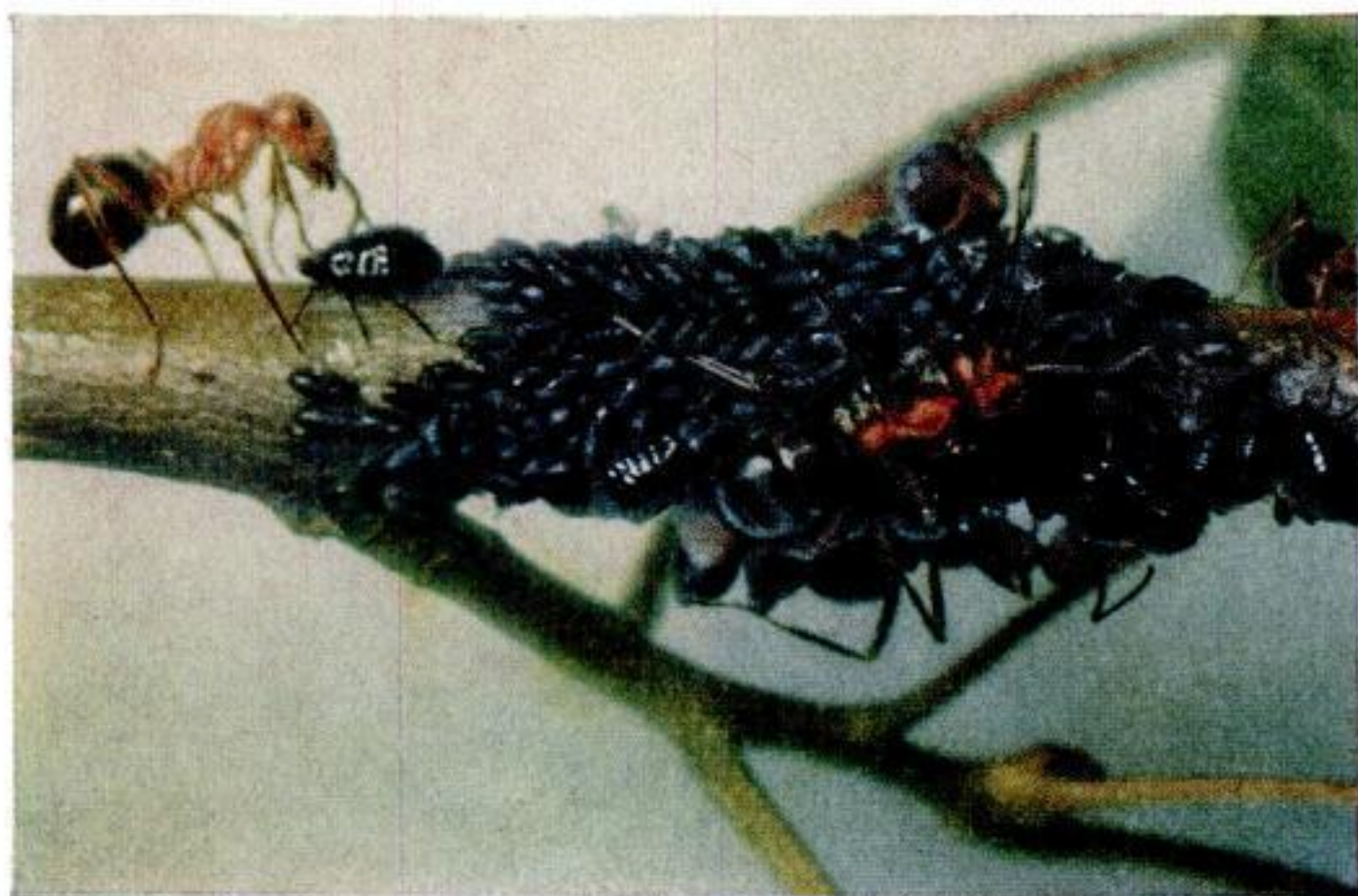


CONCEALED FOR ATTACK, an ambush bug darts from the goldenrod flowers its coloration resembles, seizes a hover fly and sucks out its juices with its beak.

THE MANY MEANS OF SURVIVAL

A vast variety of adaptations enables insects to live out their lives. One is camouflage, which helps a fugitive to vanish or a predator to blend imperceptibly into its background. Another source of protection is the world itself, some insects finding refuge in plant tissue, the soil and water. The coverings they secrete or build about themselves protect still others. And insects may even find safety in bold advertisement of the dangers they present to predators.

The most advanced in the ways of adaptation are the social insects, which not only use the world as they find it about them but cultivate it for their benefit (*below*). And during the endless process of protecting themselves, insects early evolved the added escape of flight (*next page*).



HERD OF APHIDS is tended by wood ants, who stroke them with antennae (*left*), causing them to secrete honey dew which ants lap up, feed to their young.



CONCEALED FOR DEFENSE, a wingless walking stick rests among the twigs it resembles. Others of this family have sail-like backs giving them the look of a leaf.

THE FORMS OF FLIGHT



SINGLE WINGS of a mosquito vibrate to produce its familiar hum as it flies with proboscis extended.

The rear wings of ancient species have evolved into the short gyroscopes that stabilize them in flight.

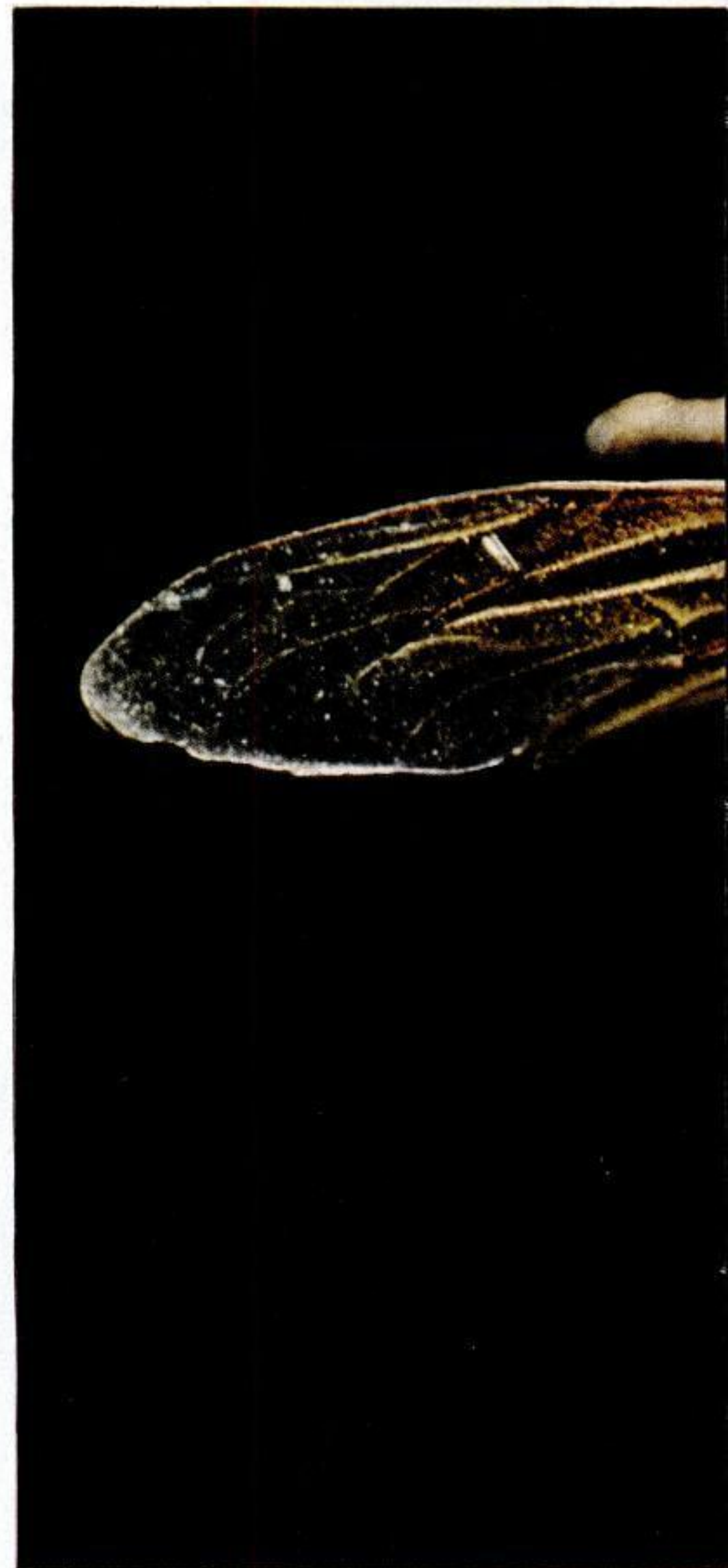


INDEPENDENT WINGS of dragonfly move in pairs, forewings (*top*) beginning downstroke as hind

wings finish it. Because they are on different strokes, forewings barely disturb rear wings with turbulence.



HOOKED WINGS, in which barbs hold fore and rear wings together, enable an insect like the cicada





killer to carry more than its own weight. Ending an upstroke (*top, left*), wings are feathered. They flatten

out as they push down (*top, right*) and feather again as they begin to rise once more (*above*). Hooked

wings avoid turbulence entirely and provide most efficient way of getting the greatest lift and thrust.

CONTINUED

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DAMSELFY

MINING BEE

HONEY ANT

CUCKOO BEE

HONEY ANT

ANT LION LARVA

HONEY ANT COLONY

HISTER BEETLE

A COMMUNAL LIFE ON THE DUNES

On the Antioch dunes of California, near the junction of the San Joaquin and Sacramento rivers, lives one of the most richly varied insect communities. The sand, clay and soil are ideal for the burrows of wasps and bees. Grasses and lotus and lupine plants flourishing on the dunes provide plentiful food. Because the dunes lie near the University of California and the California Academy of Sciences, the life upon them has been studied for decades by entomologists. Artist Walter Linsenmaier's painting of the integrated society found there is based on their discoveries.

Beneath the sands (*bottom left*) lives a colony of honey ants, which



a dead ladybird beetle, killed by an aphis wasp larva. The aphis wasp seeks out ladybird beetles as well as aphis, injecting its eggs into them. The ladybird lives on although the larva feeds. At pupation time, the larva emerges and spins its cocoon, thereby attaching the weakened ladybird beetle to a leaf. A brown hover fly, the sand wasp larva's favorite food, flies toward the lotus plant where a thick-headed fly is feeding as a sandhill skipper lays its eggs below. A minute cuckoo wasp, seeking to lay its egg among aphis in an aphis hunter's burrow, is attacked by the aphis hunter. It seizes the wasp which has rolled into a tight ball for defense.

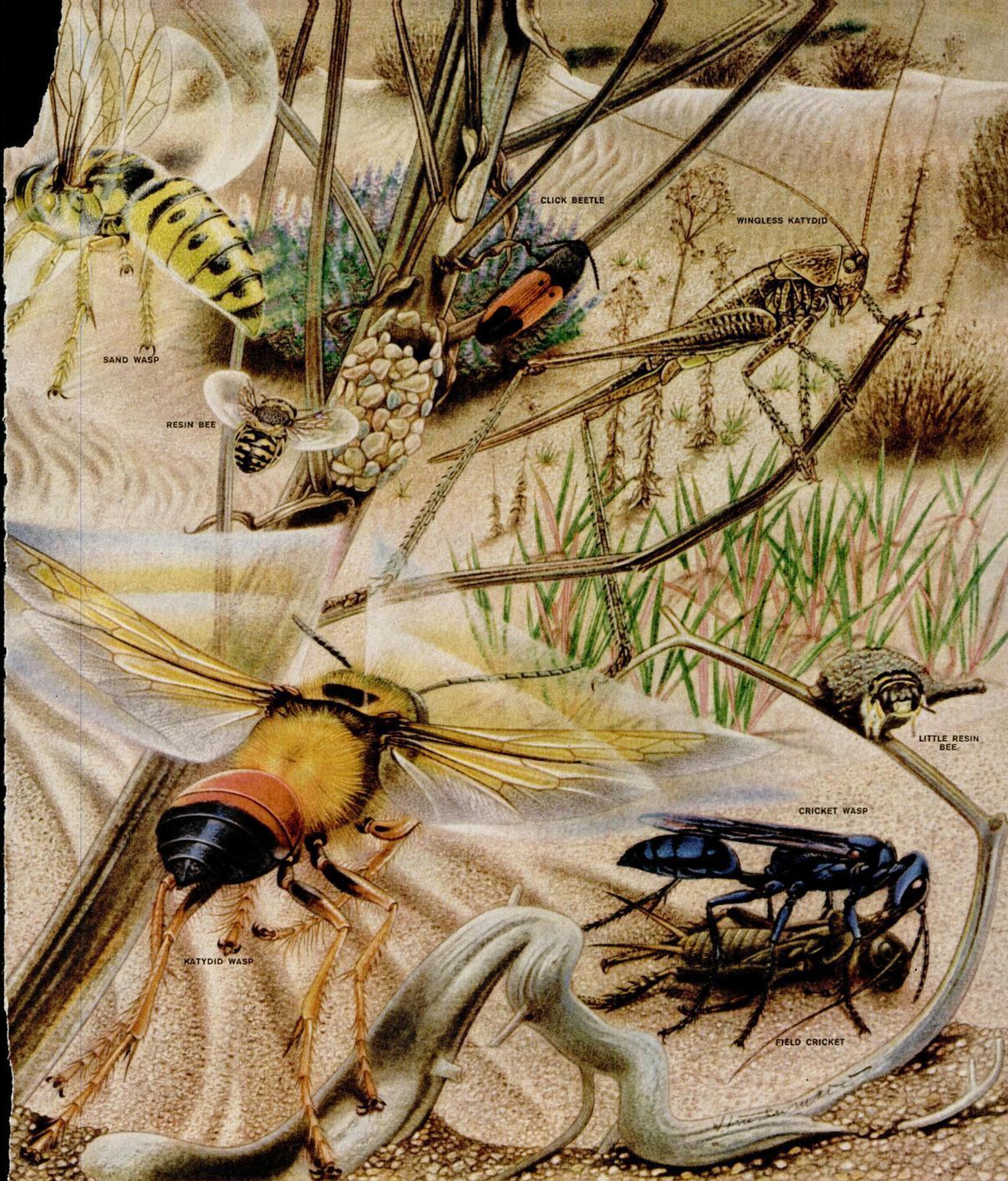
Though voracious when a larva, the ant lion as an adult eats very little, rests on the grasses by day and flies at night. Here a stink bug feeds beside it. A thick-headed fly rides on the back of a sand wasp, forcing apart its abdominal segments and laying an egg in its body. Though it survives the voracious larva for a time, the wasp eventually crawls into its burrow and dies while the fly larva pupates within her body. Lying in a neighboring burrow, a Jerusalem cricket, eaten by cats and coyotes, waits for night to forage for food. To the right, a cotton bee inside her burrow brings pollen to fill the top cell. She has already filled the lower



gather nectar from nearby lupine plants or honey dew from the lupine aphids. Returning, they regurgitate nectar into ants called repletes, which cluster in the lower tunnel. Swollen with food, the repletes store it for the colony's winter use. Above them are eggs and nurse ants, and to the right is the colony's queen, her abdomen swollen with eggs. Near the entrance to the colony, concealed at the bottom of a conical depression, lies an ant lion larva, which seizes a honey ant that has fallen into its hole. Flying to the dunes from the nearby river, a blue damselfly rests on grass above the ant colony as a tiny red water mite clings to its side.

Heading for her burrow in the cliffs, a mining bee carries honey to fill the tiny pots she makes for each egg she lays. Following her is a cuckoo bee which is a parasite, laying its eggs in the mining bee's pots. Hatching out, the larvae feed on the honey stored there, as do those of the blister beetle, which also parasitize the mining bee burrow.

Near a heavily armed hister beetle, one of the dune's rarer inhabitants, a giant cotton bee returns to its burrow with a load of pollen which will form the food of her larvae. Discovering the cotton bee burrow, the parasitical four-spined cuckoo wasp will tunnel down beside



it and lay an egg. Its larva, on hatching, eats the larvae of the cotton bee.

As aphids swarm over the lupine, they attract predators like the hover fly larva, which eats a dozen or more of them before it pupates. Another predator is the aphid wasp, which lays its egg inside an aphid. Feeding on the aphid, the larva kills it and pupates within the empty shell.

Farther up on the lupine is a hover fly, which lives on nectar and lays its eggs among the aphids that form its larvae's food. Seeking out hover flies, the sand wasp captures them to feed its larvae. In turn, the sand wasp forms the food of one of the dunes' most voracious carnivores,

the robber fly, which paralyzes its prey and then sucks out its juices.

Clinging to a dead branch, a click beetle waits for night to fly off and feed. Below the beetle is a nest of pebbles, stuck together with resin by the resin bee, which then fills individual cells inside with honey and an egg. Nearby is a similar cell, formed of resin alone by a close relative, the little resin bee which is just emerging after pupation.

Also waiting for night and feeding is a wingless katydid, hunted by the katydid wasp as a provision for its burrows. Another predator, the cricket wasp, stocks its burrow with field crickets that live on the dunes.

CONTINUED

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RED VELVET ANT (MALE)

ASHY GREY
LADYBIRD
BEETLEACMON
BLUE BUTTERFLY
(MALE)THICK-HEADED
FLY

PEA APHIS

LADYBIRD BEETLE
LARVAACMON
BLUE BUTTERFLY
(FEMALE)ACMON BLUE
CATERPILLAR

JUNE BEETLE

CLICK BEETLE LARVA

JUNE BEETLE HUNTER

JUNE BEETLE
GRUBHAIR-STREAK
BUTTERFLY

Winging above a lotus plant is one of the few inhabitants of the Antioch dunes that lives its life free from predators, the red velvet ant. Actually a wasp, it is tough-skinned and the female ant possesses a powerful sting. After mating, the smaller, wingless female (right) searches for the burrow of another species of sand wasp and injects her egg through the cocoon into the body of the pupating larva she finds. There the red velvet ant larva feeds and matures.

As a hair-streak butterfly gathers nectar above it, a June beetle hunter sweeps its antennae over the ground in search of the smell of a June

beetle grub beneath the surface. Detecting it feeding on plant roots, the hunter digs down and deposits its egg beside the grub on which the hunter's larva will later feed. Nearby, a June beetle has pupated and emerges from the earth as an adult. A click beetle larva below it feeds on lotus roots. Above ground, on the stem of the lotus, a caterpillar of the Acmon blue butterfly eats, as male and female adults fly above it.

Encrusting a lotus stalk, pea aphids suck its juices. A ladybird beetle larva moves in to make a meal of one of them and an ashy grey ladybird beetle feeds on others above. On a leaf to the right of the larva lies

FOLD OUT, DO NOT TEAR



one, laid an egg and closed it. Finding the burrow entrance, a spineless cuckoo wasp will dig down and leave her egg which will later hatch and eat the bee larva.

The sand wasp is the prey of many of the dunes' insects. She digs her burrow, lays an egg in it and, after the larva has hatched, reopens the entrance to bring it various species of flies. If the larva survives, it spins a cocoon and spends the winter there. But if a bee fly spots the open burrow, it may swoop down and drop an egg at the burrow entrance. On hatching, the bee fly larva makes its way down to the sand wasp larva,

waits until it is well fed and then sucks it dry. If it escapes the bee fly, the larva may be discovered by a white velvet ant which, like the red velvet ant, deposits its eggs through the cocoon into the pupating larva. While bee flies and ant wasps are searching for her burrows, the miltogrammine fly follows the sand wasp on the wing as she flies to her burrow, passing one of the rarest of all dune insects, the flower-loving fly. When the sand wasp lands with a fly for her larva, the miltogrammine fly attaches an egg to it, which is then carried down the tunnel. After the larvae have hatched, the wasp then feeds both of the young.

Photographed for LIFE by ANDREAS FEININGER, ROMAN VISHNIAC and EDWARD S. ROSS. Painting by WALTER LINSENMAIER

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JULIE HARRIS AS SALLY HAS A MELANCHOLY MOMENT AT THE PARTY WHEN SHE EYES A BOTTLE, FINDS IT EMPTY

Wildest Movie Binge

Just about the wildest party ever seen publicly on film careens around Sally Bowles, the heroine of *I Am a Camera*, a movie version of Broadway's 1951 stage hit. Sally, a giddy little girl who paints her nails green, sings in a Berlin nightclub and tries to seem more wicked than she is, is masterfully acted, as on Broadway, by Julie Harris. And the party sequence, which was added especially for the movie, is violently funny. It reaches a climax when a young man suffering from a hangover is beset by an army of

ghoulish doctors, who try to cure him with steam baths, electro-therapy and violent massage while merrymakers stagger around him.

Although the film lingers on Sally a little too long and lovingly for its own good, *Camera* is sure to have some box-office success. This is due partly to Julie Harris's performance, partly to the notoriety made inevitable by a development last week. Because of its chatter about sex, the film was refused a seal of approval by the Production Code Administration.

CONTINUED

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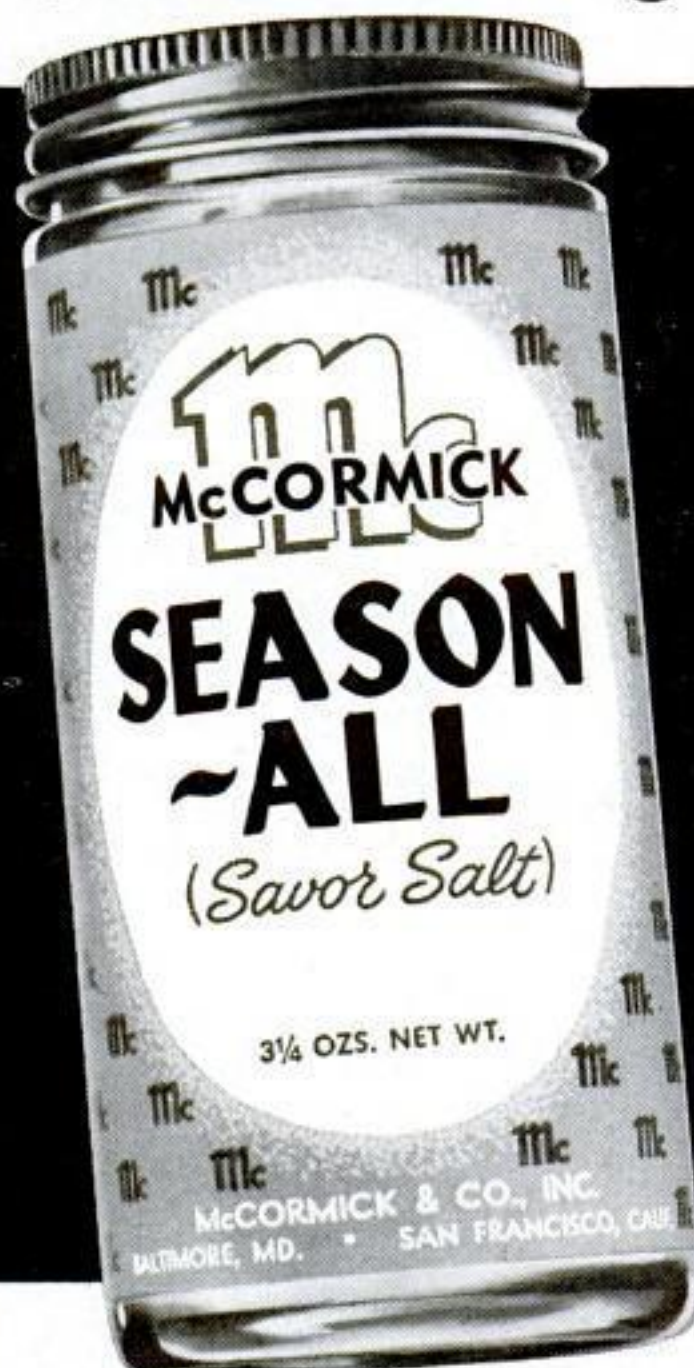
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FOR ACID INDIGESTION
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for cuts, burns, Athlete's Foot

New REXALL GERMATINE

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BOTH ONLY **79¢**

Try the small bottle—if not completely satisfied, return the unopened 6-oz. bottle for full refund of your 79¢



New Rexall Germatine is a powerful, penetrating germicide, fungicide and disinfectant that doesn't sting or stain—there's just a pleasant tingle to let you know it's gone to work killing bacteria, helping to prevent infection. Rexall Germatine's detergent action gets it down into skin cracks and crevices, makes it a superior cleanser. It's water-clear, so it can't stain. Has a fresh, clean odor—no "hospital" smell. Germatine is highly effective for cuts, scratches, shaving nicks, minor burns and sunburn, poison oak and ivy, non-poisonous insect bites, heat rash and Athlete's Foot. Dilute it for use as a sickroom and household disinfectant and deodorant, or for sterilizing surgical instruments. Buy Rexall Germatine today for your home medicine chest, locker, golf bag and tackle box! No-risk trial offer ends Sept. 30th!

Rexall



SYMPATHETIC SALLY takes time out from the party to feel the fevered brow of her friend Chris (Laurence

Harvey) as he is lugged by a masseur from a steam bath to an ice-cold lavatory to see him through a hangover.



SCINTILLATING SALLY swings into a dance as she snatches a cigar from her American suitor (Ron Randell).

The next morning most guests are prostrate, but Chris is cured of his hangover and Sally is simply invincible.

SAVE ON SIMMONS' NATIONAL "85" MATTRESS!

new miracle posture construction

Only \$39⁸⁵

On the occasion of Simmons' National 85th Birthday, a specially created mattress quality worth many dollars more!



New, miracle posture support. Extra-firm springs, assembled in a unique way, provide firm, restful support for your back and whole body.



Exclusive Auto-Lock® coil construction. Hundreds of coils, precision assembled, for longer-lasting, even support.

Decorator ticking. Lovely floral design in a long-wearing fabric usually found only in costlier mattresses.



Airflow vents let the old air out and bring the fresh air in. There are also cord handles for easy turning.



No-sag edges. You can sit or stand on them . . . even jump on them . . . they'll keep their firmness, thanks to Simmons' pre-built border.



This label identifies the mattress value of the year. Look for it now at your favorite store selling Simmons.

Why you save: It happens that Simmons makes more mattresses than anyone else in the world. So Simmons can turn its big volume toward the creation of a money-saving special that just can't be beat.

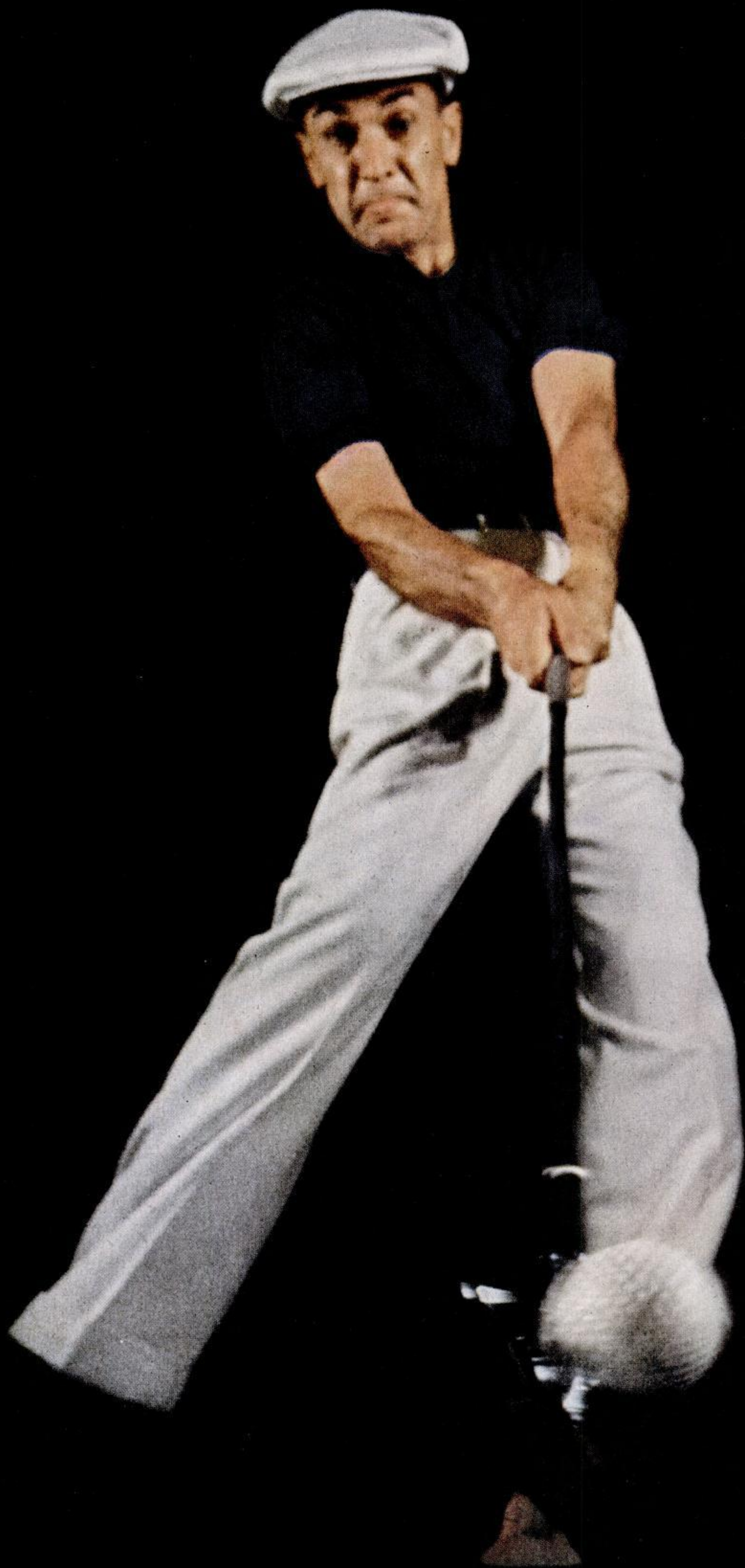
Of course, this mattress is not as good as Beautyrest,* made also by Simmons. We would be fooling you if we said so.

But, Simmons guarantees that the National "85" mattress is better than anything at its price, and better than many mattresses costing many dollars more.

An outstanding value opportunity for a limited time only. See it with matching box spring at your favorite furniture or department store.

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THIS IS MY SECRET

Ben Hogan finally reveals the mysterious maneuver that made him a champion

Ben Hogan, the greatest golfer of his—and probably anybody else's—time, is also the creator of the game's most subtle intrigue. He has vowed steadfastly that the reason for success over the last decade has been a mysterious device incorporated into his swing. "It is easy to see if you know where to look," he said, and defied the world to find it. Wherever he hit a golf ball skeptical professionals and enthusiastic amateurs studied his every move. Almost everybody had a theory and six competent pros expressed theirs (LIFE, April 5, 1954) without

actually hitting on it. Some pros claimed Hogan had let them in on the secret, which Ben denies. One who professes to have found it is Jack Fleck, whose inspired play at San Francisco last month kept Hogan from becoming the first man to win the U.S. Open five times. "He might have used a secret," says Hogan, who watched him carefully, "but it wasn't mine." In this article, having decided to give up serious competition at the age of 42, Ben Hogan reveals his controversial secret and the circumstances which brought it into being.



KEY TO THE SECRET is a simple maneuver illustrated by these close-ups of Hogan's hands. They show how Hogan's hands look when he is not using the secret and when he is. The maneuver is executed just before he reaches the top of his backswing. With a conventional swing Hogan's left wrist remains straight



(left). When the secret is applied (right) the left wrist bends backward and inward forming a slight V. The most important of three things which constitute Hogan's secret (see text) is that it opens the club face to the fullest and makes it impossible for him to close it fast enough on downswing to get a fatal hook.

by BEN HOGAN

THE better swing you have and the better player you become—as far as hitting the ball, that is—the more definitely you become a hooker. The mechanics of a good swing demands a hook. To get distance the hands roll into the ball just before the point of impact and after it is hit the wrists roll over the top of the shaft. When hit this way—the way the best tournament players hit it—there is nothing for the ball to do but take off low and hard. It curls from right to left at the end of its flight. It comes into a green or fairway hot, like a fighter plane landing. It is very hard to control, or at least I found it so.

Most of the top players on tour today are fighting a hook. They fight it on almost every shot they make. When they miss a shot you will find them missing the green on the left. A hook is hard to judge. Maybe one week you will be able to judge it adequately, but then the next week you aim a little farther over to the right to compensate. Sometimes a hook gets so exaggerated that you don't know where to aim, or have room to aim it. I was in this predicament in 1946, although it was more of a crisis than a predicament. I was having trouble getting the ball in the air. I had a low, ducking, agonizing hook, the kind you can hang your coat on. When it caught the rough it was the terror of the field mice. I tried all the conventional cures—opening the stance, altering the grip, using more left arm and cutting the ball. They all worked, but in the process they cut down my distance by five to 10 yards. Five yards is a long way. You can't give anybody five yards. You can't correct a fault with a fault.

I was finishing in the money and occasionally winning a tournament, even with a terrible game. But the handwriting was on the wall. If I was going to stay and make a living, something had to be done. I left the tour and went home to Fort Worth about as desperate as a man can be. I sat and thought for three or four days. I did not pick up a golf club, although I wanted to in the worst way. One night while laying awake in bed I began thinking about a technique for hitting a golf ball that was so old it was almost new.

It had been recommended by the Scottish pros who came to this country to teach golf long ago. Called pronation, it flourished for a while and was then discarded as antiquated and unsound. It is a movement which commences the moment a player begins his backswing. The hands roll gradually to the right until the back of the left hand is facing almost straight up at the top of the backswing and the back of the right hand almost straight down. The face of the club opens with this roll of the hands. On the downswing the face of the club gradually closes again until it is theoretically in its original position as it meets the ball. In itself pronation is no cure for a hook. If anything, it helps to promote one. But for me it was the basis for a new experiment, and before the night was over I had added two adjustments, which on paper made pronation hook-proof without any loss of distance.

I was so eager to get out to the practice tee the next morning that I don't think I slept the rest of the night. The first ball I hit behaved in spectacular fashion. It had a nice, high, straight flight. Instead of

hooking at the very end it had a slight fade to the right. It came down light as a feather. The harder I hit the better it worked. There was no loss of distance.

I practiced six or eight hours and couldn't wait to come back the next day. It worked even better then and for a week after that. But I had to put it to a test. Sometimes things tried in practice fall apart when tension is put on. I went to Chicago for the Tam O'Shanter and it worked under all the stresses. I won the tournament. It was like learning to play golf all over again.

The two adjustments had transformed pronation into a bonanza for me. They were so delicate that no one would ever think of looking for them—and I certainly was not going to tell anybody where to look. The first was in the grip. I moved my left hand one-eighth to one-fourth inch to the left so that the thumb was almost directly on top of the shaft. The second adjustment, which is the real meat of the "secret," was nothing more than a twist or a cocking of the left wrist.

I cupped the wrist gradually backward and inward on the backswing so that the wrist formed a slight V at the top of the swing. The angle was not more than four or six degrees, almost invisible to the human eye. This simple maneuver, in addition to the pronation, had the effect of opening the face of the club to the widest practical extreme at the top of the swing.

At this point the swing had been made hook proof. No matter how much wrist I put into the downswing, no matter how hard I swung or how hard I tried to roll into and through the ball, the face of the club could not close fast enough to become absolutely square at the moment of impact. The result was that lovely, long-fading ball which is a highly effective weapon on any golf course.

Since stumbling onto this magic device 10 years ago, I have not seen it used by any touring pro. I was certain that it would take at least one stroke a round off a score and since we were competing, I withheld my discovery. It took more than one stroke a round off my score. I found that I did not have to work as hard because I had a ball that was easier to control. I did not have the worry and fright of getting the ball away. I was more secure in my game and did not have to practice as long or as hard as before.

In normal tournament play I used the secret approximately 90% of the time. Whenever I did there was nothing automatic about it. I was very conscious of cupping the left wrist. In fact, it was the only thing I concentrated on, the rest of my swing operating on muscle memory. I did not use it every time. If a shot required a hook I simply eliminated the twist of the wrist and got it.

In this year's U.S. Open I could use my secret only about 60% of the time. At the Olympic Club in San Francisco most of the dog legs to the right had a wind from left to right so that the ball had to be hooked to hold a straight line. The 10th hole, as well as the 11th and 12th, required a hook or your ball would find the rough to the right every time. This is not an alibi because I can hook a golf ball about as well as anybody. I was such an expert at it once that it almost put me out of business.

Now that I am through with serious competition—and I worked harder getting ready for this last Open than any tournament in my life—I don't mind letting the world in on my secret. The technique of hitting a golf ball is improving all the time and I hope this will prove a refinement when golfers get to a certain point. I doubt if it will be worth a doggone to the weekend duffer and it will ruin a bad golfer. With the club so wide open at the top of the backswing anybody who fails to close it properly on the way down will push the ball off to the right—or worse yet, shank it off to the right at a horrible right angle. But it will be a blessing to the good golfer. I hope it helps some distinguished but frustrated hooker get to next year's U.S. Open at Rochester, N.Y. who might not have got there otherwise.

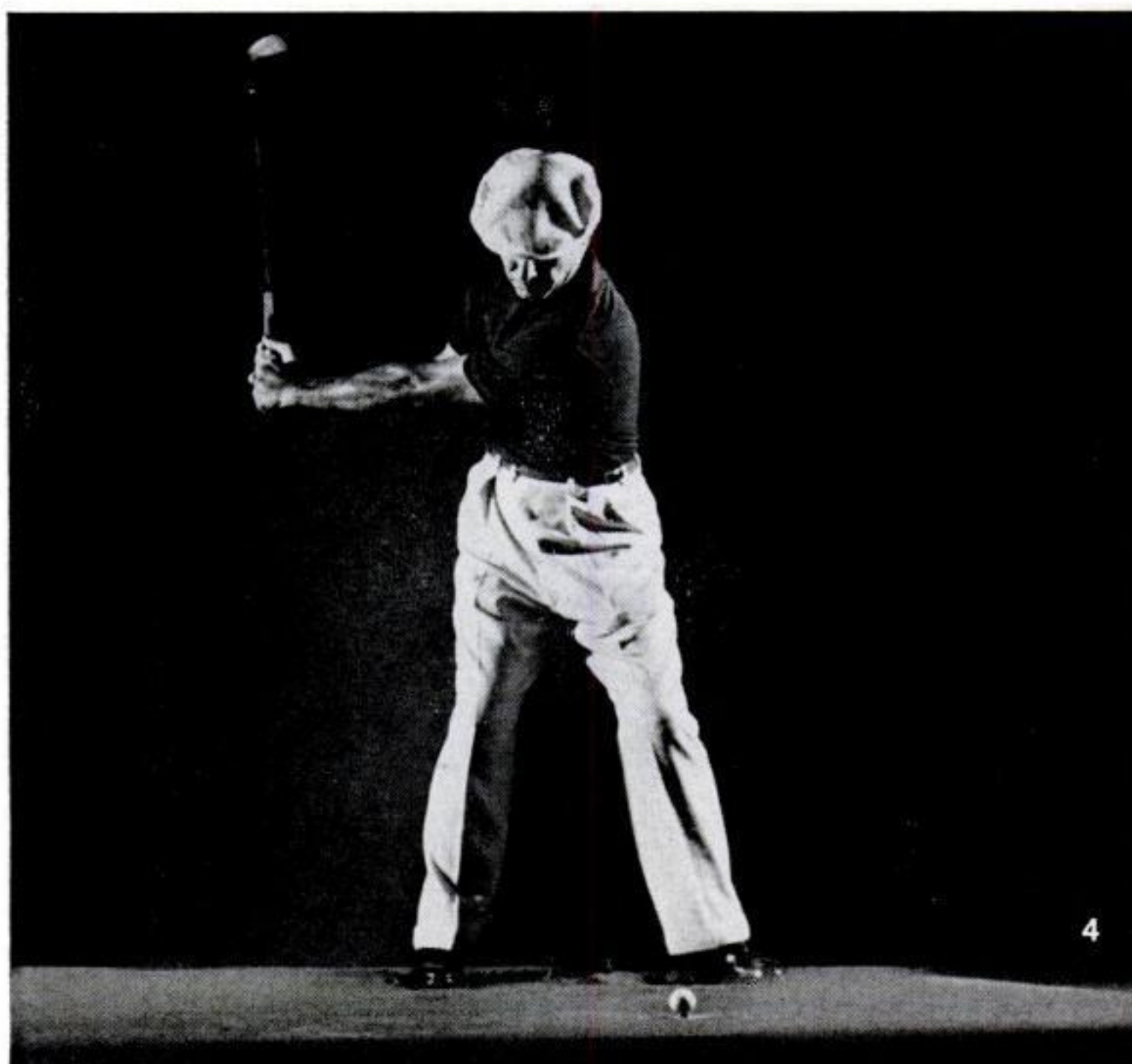
I expect to be there to see if anything new has been added.



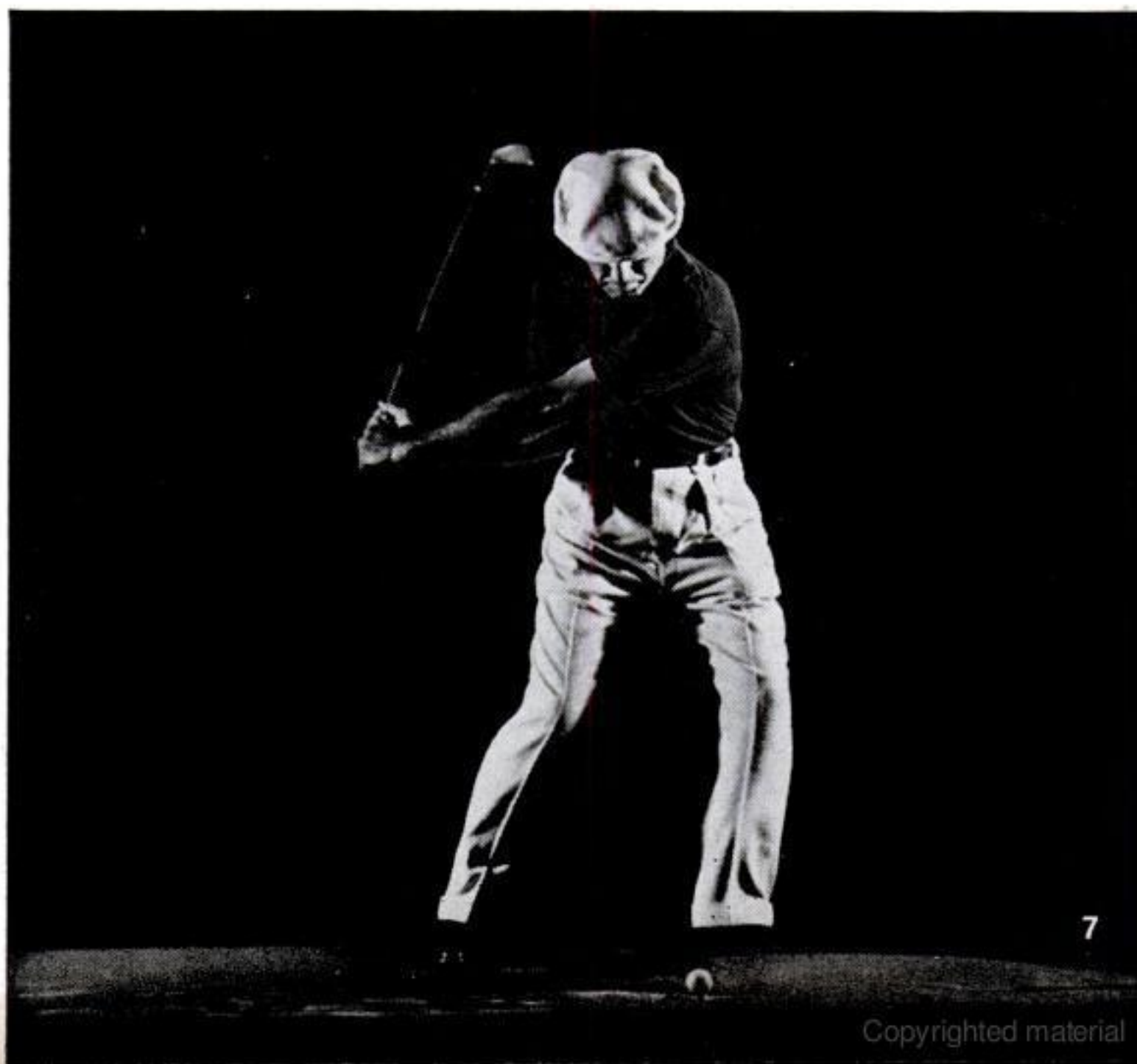
CHANGE OF GRIP called for shifting of the left hand and thumb from conventional position (above, left) to a place directly over the top of the shaft (right).

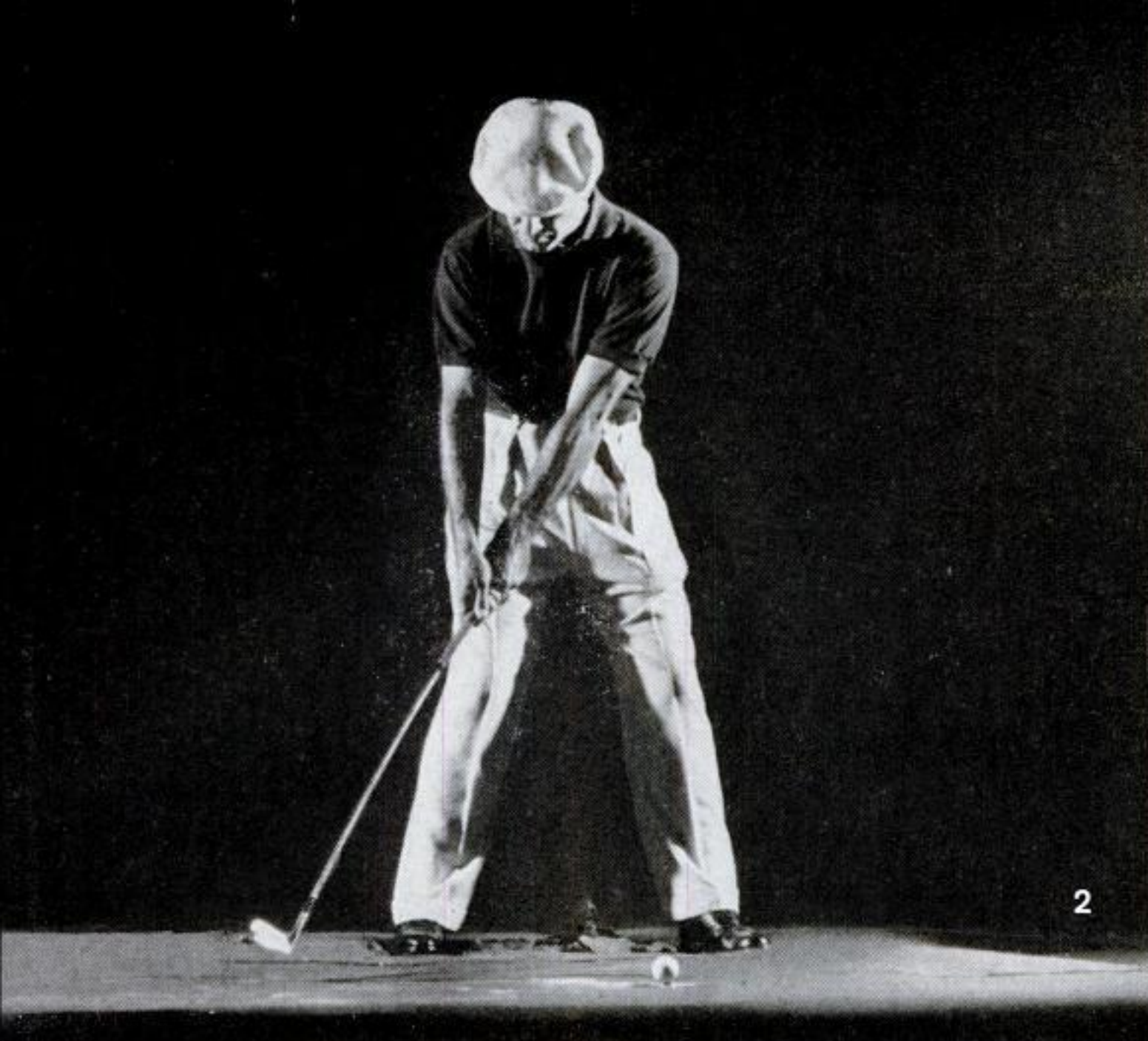


SETTING UP THE SECRET on the backswing. Hogan begins pronating almost immediately, the hands rolling gradually to the right. The face of the club starts

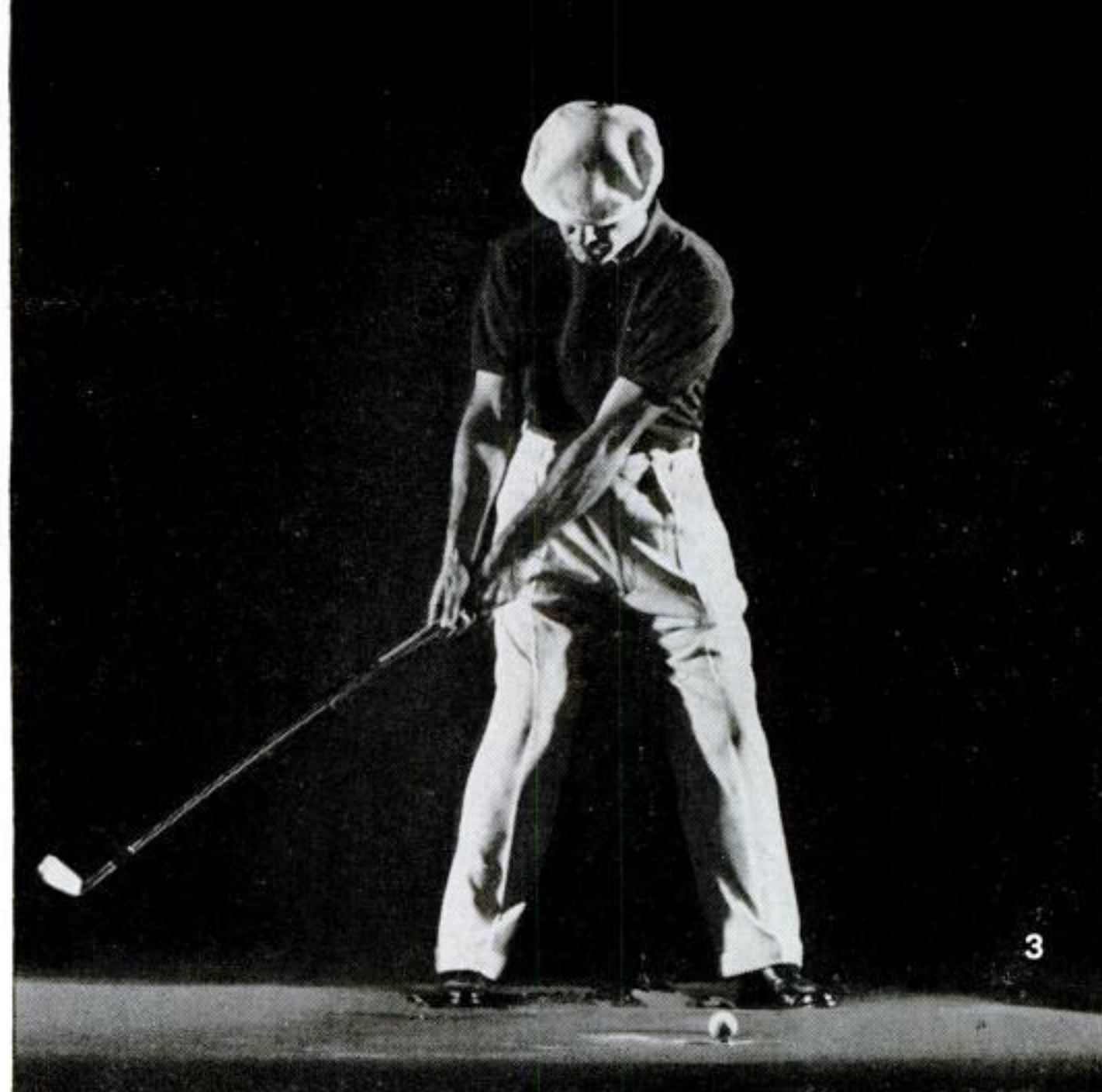


TURNING ON THE POWER in the downswing (below), Hogan uses the same old swing he has always used. His hands, still cocked on the way down (7), roll

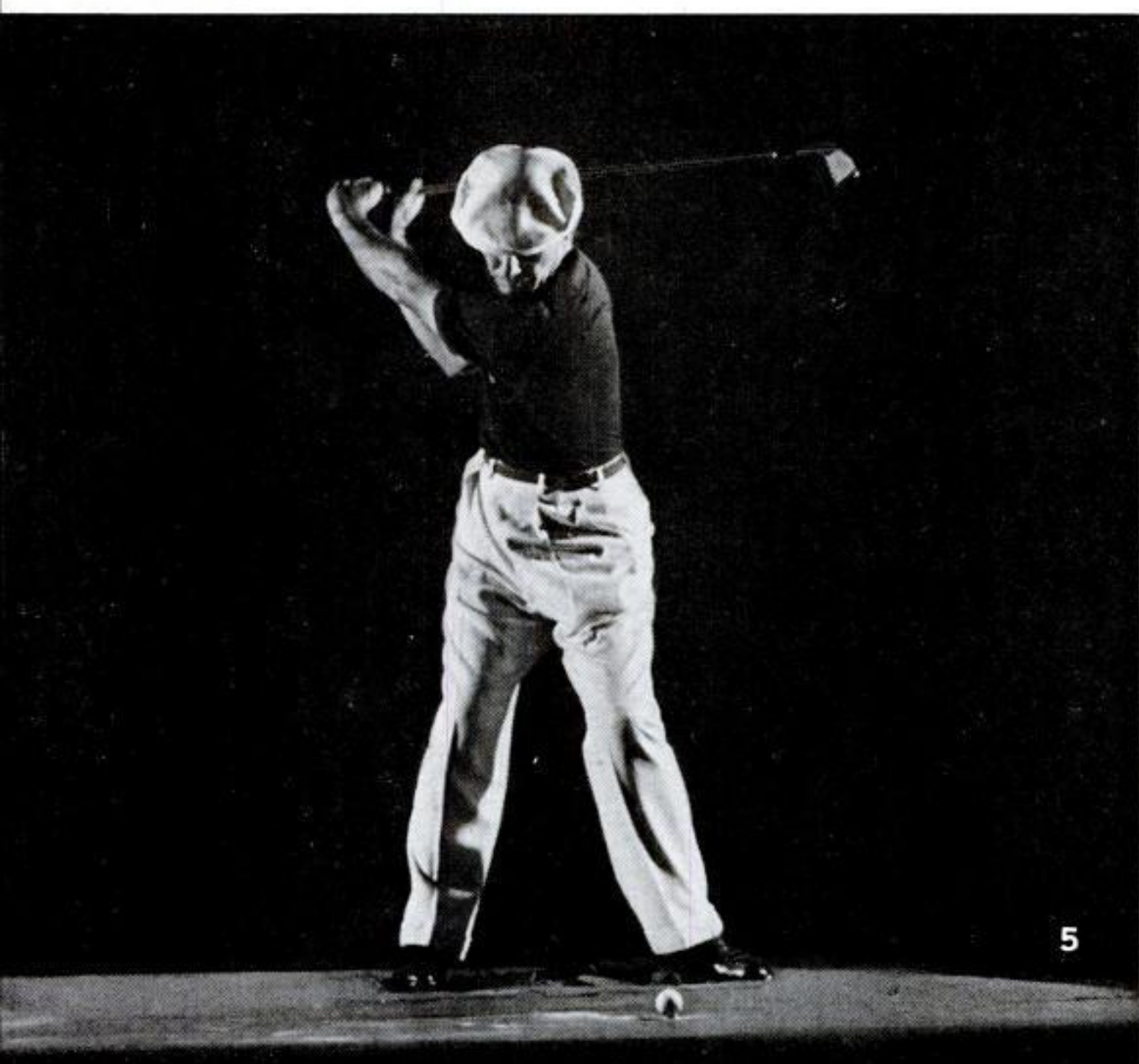




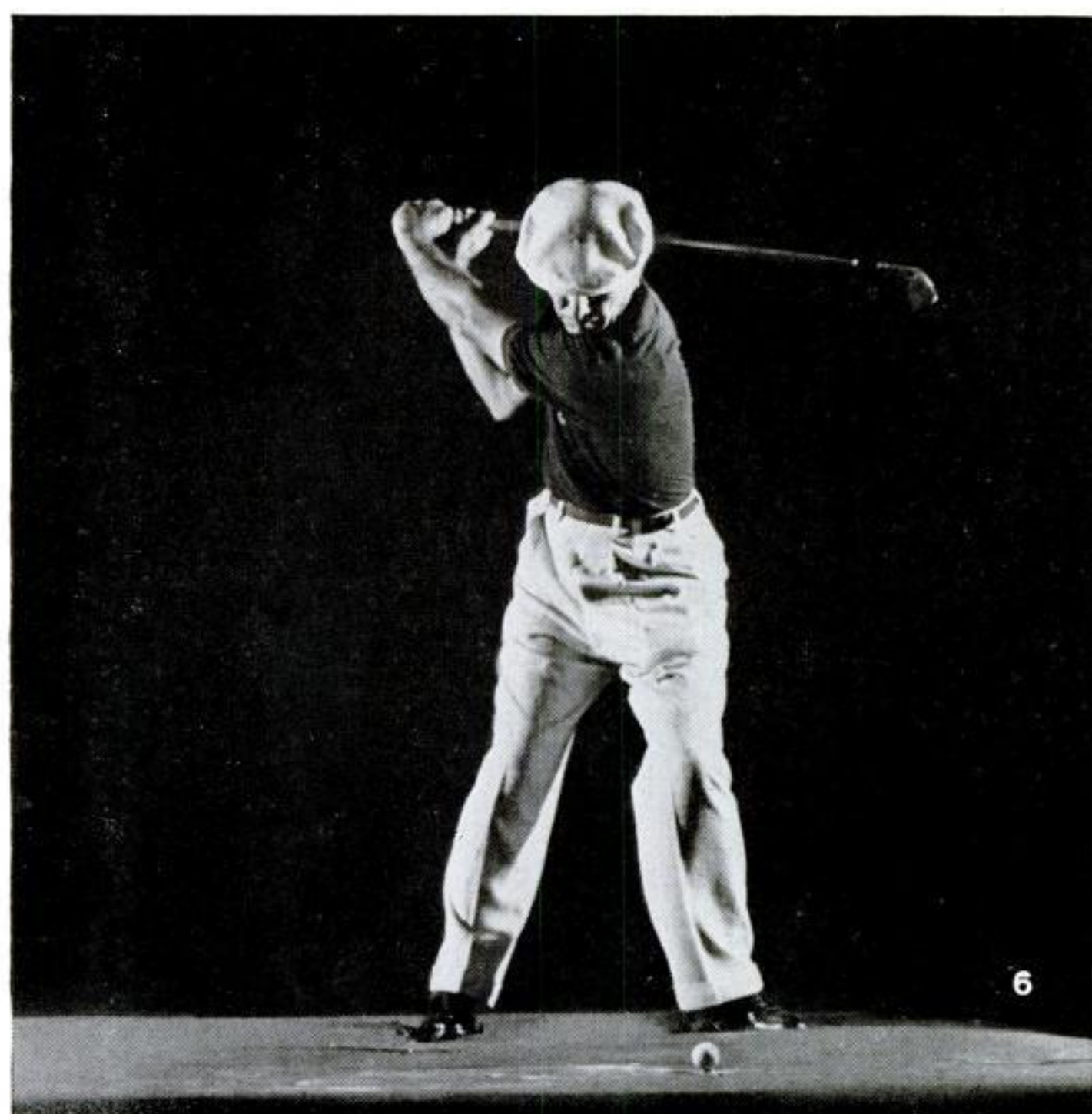
to open in picture 2 and continues to open (3) until backswing is two-thirds completed (4). At this point he begins bending his left wrist slightly backward



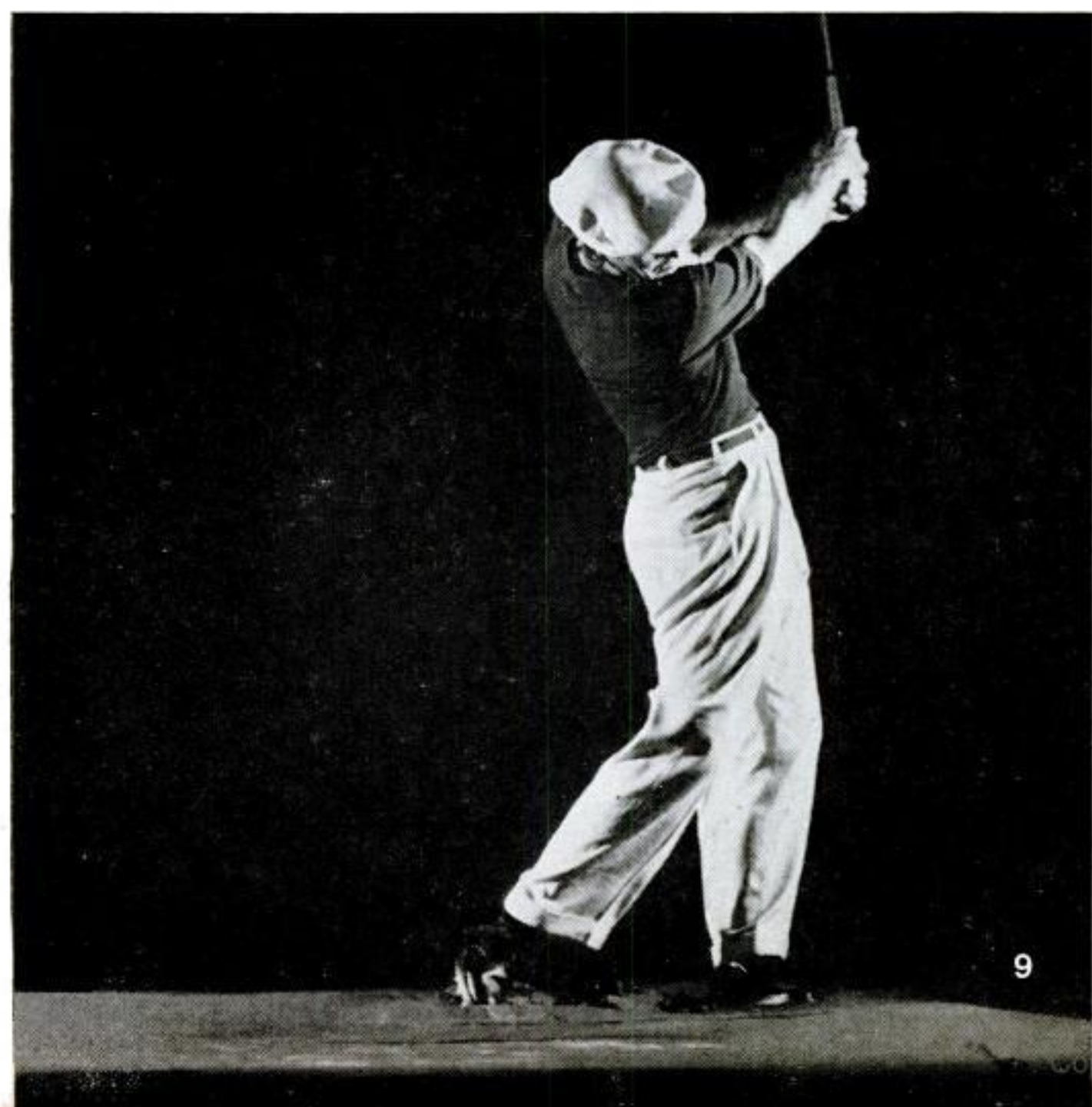
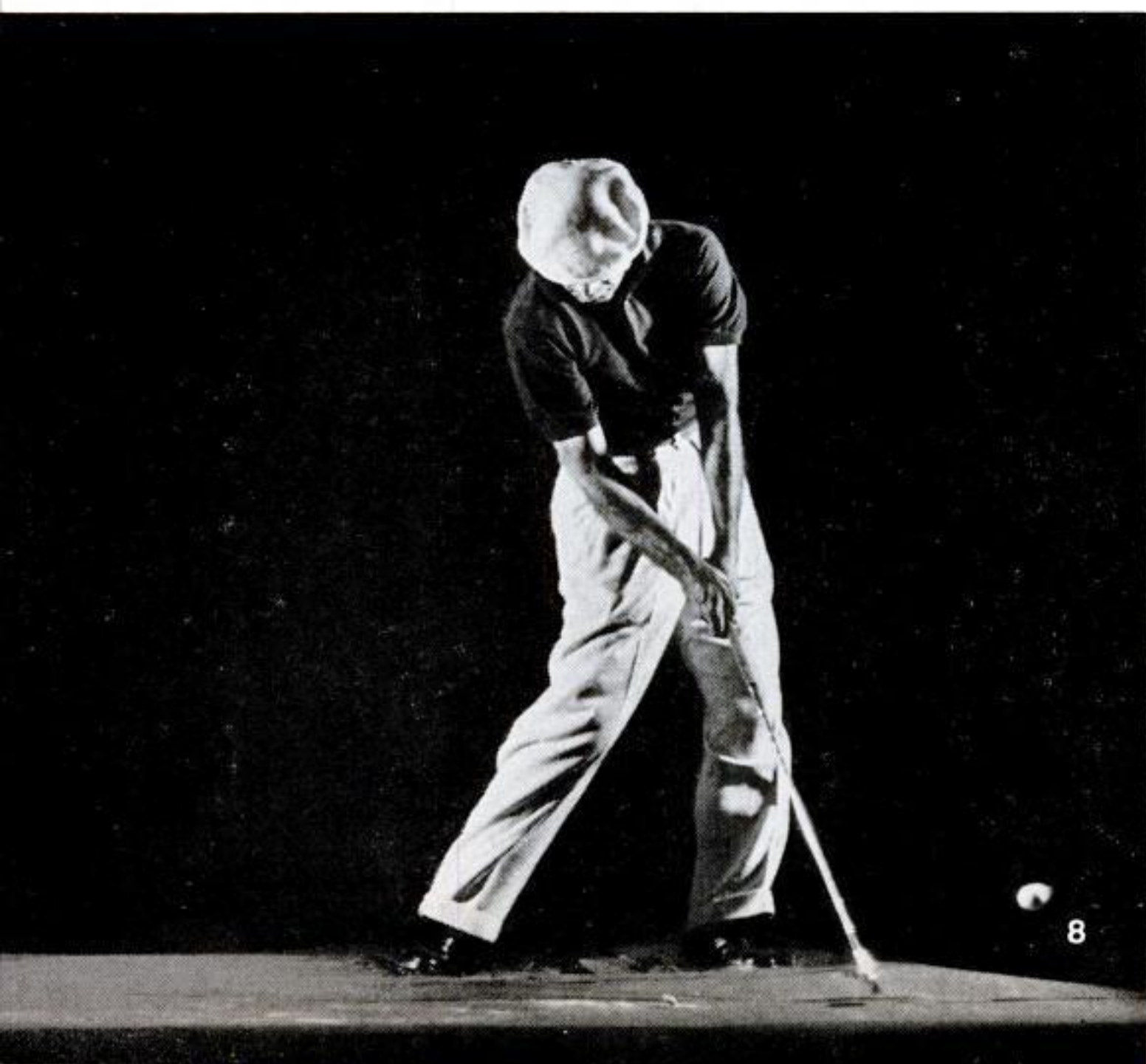
and inward (5) until it is cocked at the top of his swing (6). The secret has now been applied, club face open and the hands locked into a hook-proof position.



back toward their original position as he smashes into the ball (8) but they never get quite all the way back. The face of the club is still slightly open as it



strikes the ball despite all his effort to close it. As he follows through (9), he has hit a controlled, tail-end fade to the right with no loss of distance whatsoever.





IN WORKSHOP AT SHAKESPEARE THEATER NOGUCHI STICKS HEAD, ARM AND LEG THROUGH STOCKS HE DESIGNED TO IMPRISON CHARACTER IN "KING LEAR"



A WEIRD KIND OF 'LEAR'

London boggles at bizarre production

The costumes were compared to waffle irons; King Lear's throne to a ham bone; his crown to a hatrack and his cloak (p. 68) to a Gruyère cheese. These comments were made by London critics about a new production of *King Lear* starring Sir John Gielgud as a new kind of Lear.

The man responsible for the uproar was not Gielgud but Isamu Noguchi, who is one of America's most respected sculptors and designers. Son of a Japanese father and American mother, he dreamed up an unconventional mounting which would "eliminate all romantic association" from Shakespeare's tragedy. In the eyes of most Britons Noguchi had committed artistic mayhem. Only one critic—*The Daily Mirror's*—told his public they would be "thrilled, happily baffled and not in the least disappointed."

← ON STAGE NOGUCHI'S STOCKS IMPRISON EARL OF KENT AS LEAR LOOKS ON

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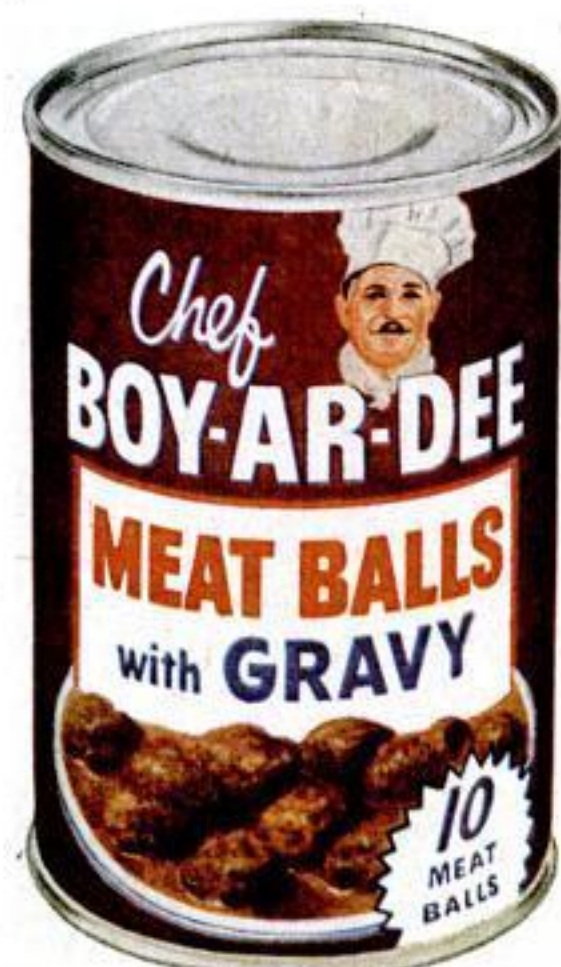
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...rousing-good meal-makers!



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Informal Supper

Chef Boy-Ar-Dee
Spaghetti and Meat Balls*
Buttered Green Beans Hot Rolls
Peach Ambrosia Brown Edge Wafers
Coffee Tea Milk

*No need to slave over a stove. Chef Boy-Ar-Dee® Spaghetti and Meat Balls comes ready to heat. Real Italian style. Delicious as only a chef can make it. Pure-beef meat balls, tender spaghetti, tomato-rich sauce. In 2-serving or 5-serving cans.



Evening Guest Snack

Chef Boy-Ar-Dee Ravioli*
Assorted Cheese
Assorted Crisp Crackers
Fresh Fruits
Coffee or other Beverage

*Ravioli used to be traditional fare at big Italian fiestas. (It took too long to make for everyday meals!) Now—you can serve it in minutes. Little macaroni pies filled with beef, smothered in rich Italian-style sauce. Two hearty servings per can.



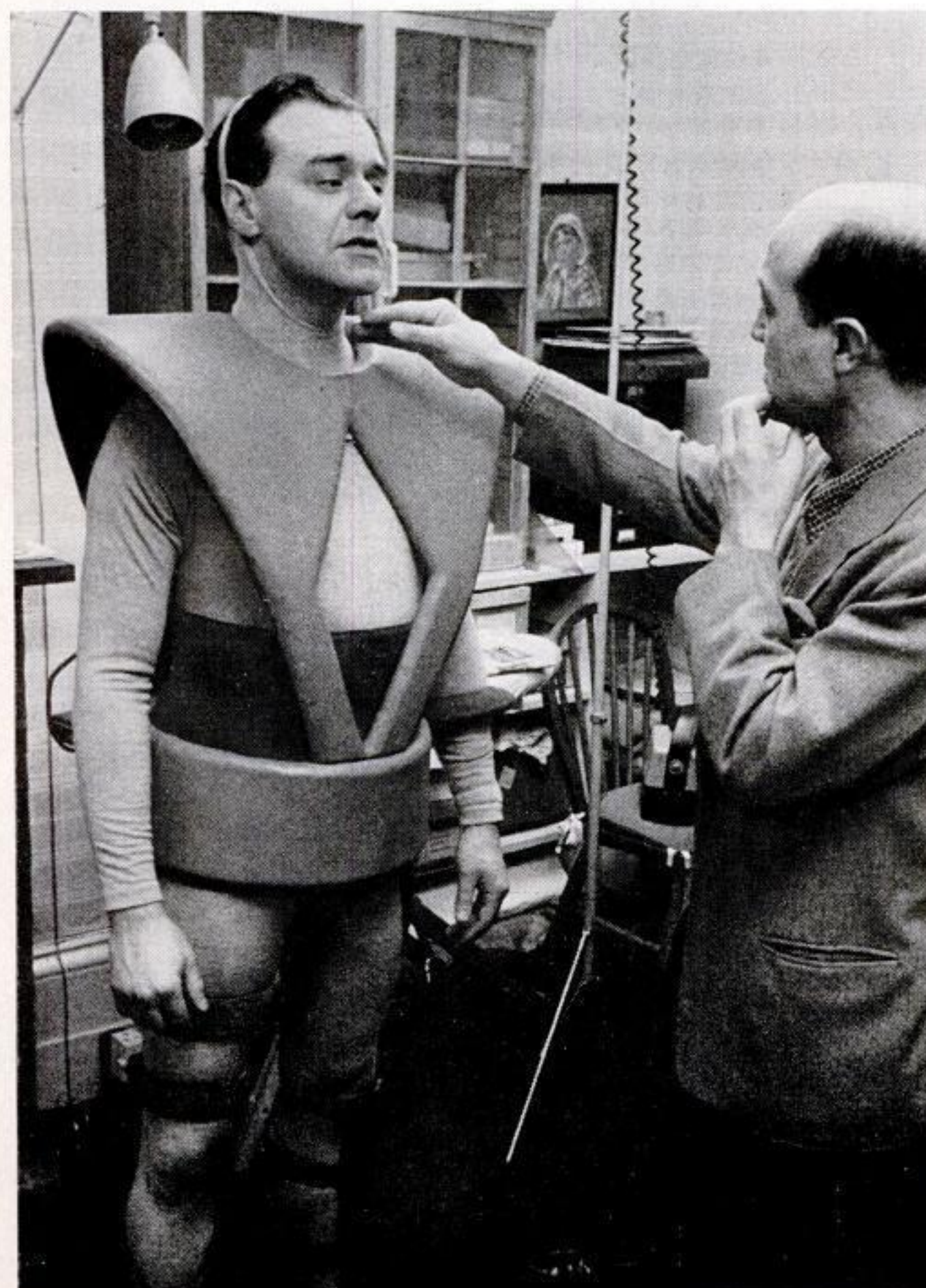
No-Work Buffet

Chef Boy-Ar-Dee Meat Balls with Gravy*
on Buttered Noodles
Mixed Green Salad
Olives Vienna Bread Pickles
Jelly Roll Coffee Tea

*Relax! The meal's practically made when you start with Chef Meat Balls with Gravy. Ten of them per can—braised, brown, made of pure beef—lots of pan-style gravy. Heat and pour over noodles, rice, mashed potatoes, macaroni, toast.



PAIR OF BEARDS are fitted on Noguchi (center) and Gielgud by make-up man Stanley Hall. But designer discarded them, fashioned his own beards.



SHOULDER PADS he designed as part of costume worn by Duke of Albany (Richard Westwell) are checked over by Noguchi before rehearsals began.

CONTINUED

HOT WEATHER Problem?

ELECTRIC SHAVERS

Use this lotion before you shave. It evaporates perspiration . . . sets up beard . . . lubricates skin for close, smooth shaves!

Any time—even in hot weather—you'll get quick, comfortable electrical shaving when you use this new *before-shave* beard conditioner.

No matter what make of razor you use—no matter how much you like it already—you'll find Williams Letric Shave gives you a closer, more comfortable shave than you ever thought possible. Cooling, soothing Letric Shave goes on like a lotion—*then* you shave.

1. It instantly evaporates perspiration . . . stops irritating perspiration drag.
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And Williams Letric Shave is even good for your razor, too. It lubricates the cutting head for faster, easier action. *Helps break a new shaver in faster!*

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Get a bottle of Williams Letric Shave today. If not entirely satisfied, write The J. B. Williams Company, Glastonbury, Conn.; in Canada, The J. B. Williams Co., La Salle, Montreal. Send us the label from your Letric Shave bottle—tell us what you paid—we will gladly refund your money.

Williams Letric Shave costs less than a penny a shave! Only 69¢ for 3-oz. bottle—enough for 80 shaves. Available at your nearest drug counter.



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LASTS ALL DAY LONG!



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Odorono's New "Protective Circle"
checks underarm moisture 24 hours!

Exclusive new formula instantly forms a "Protective Circle" around the underarm area. Actually stops odor, checks moisture before they start! Gives you the feeling of "morning-bath freshness" all day, all evening!

Super-effective! Protection continues—even through moments of activity and tension—for 24 hours.

Gentlest. No other deodorant is safer for skin and clothes!

Guarantee: Odorono, used daily, protects completely against perspiration for 24 hours or your money back.



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NOGUCHI'S LEAR CONTINUED

SYMBOLISM AND INSANITY



HOLED CLOAK in which Lear appears on stage as he curses his ungrateful daughter Goneril symbolizes the beginning of the king's mental breakdown.

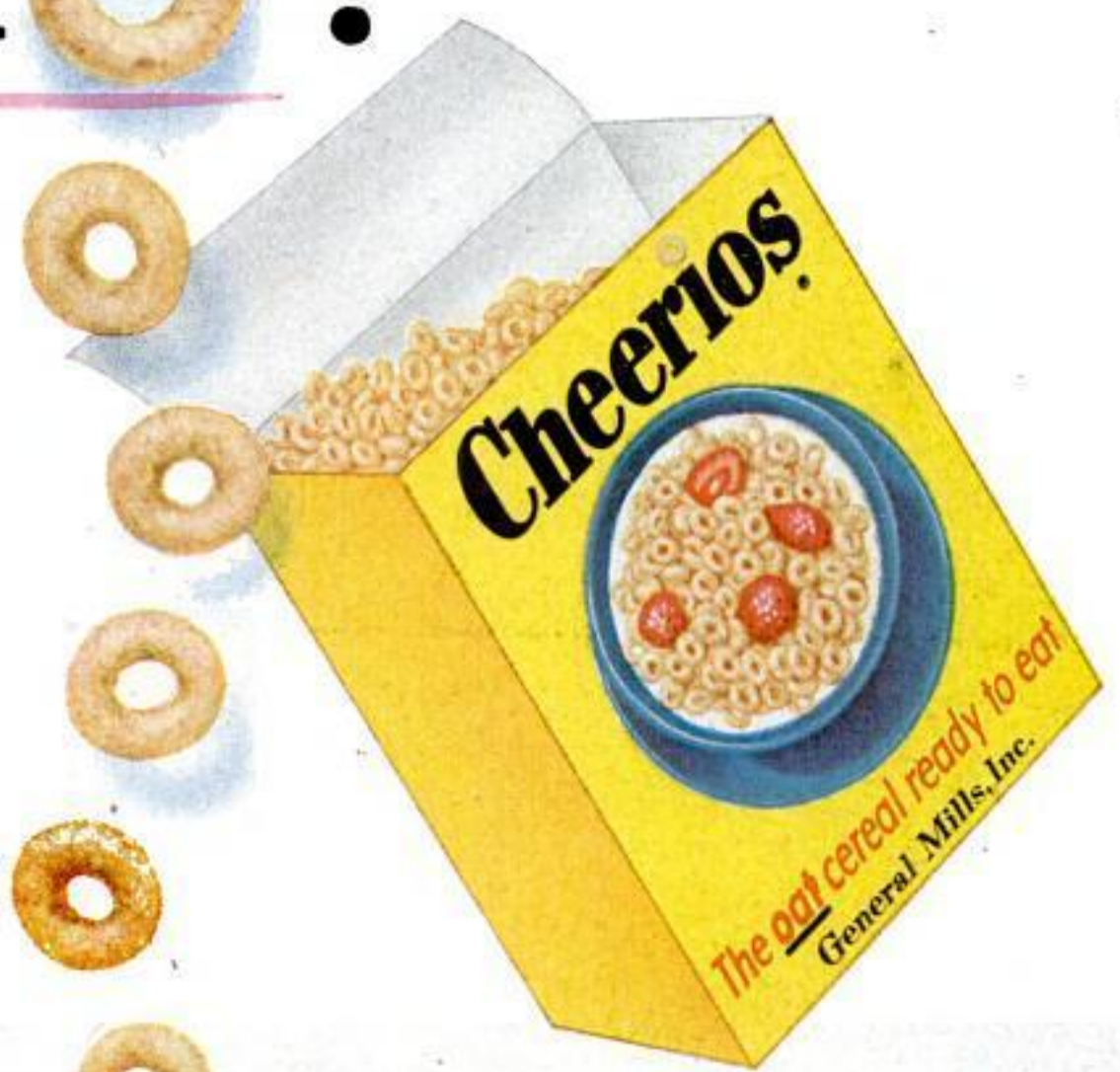


BIGGER HOLES seen in Lear's cloak, when disguised Earl of Kent offers him shelter from storm, denote further loss of old king's reasoning powers.



NO CLOAK covers the now insane and homeless king near the play's end when he and blinded old friend Gloucester meet and bemoan their miseries.

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made from ○ats
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NO COOKING!

Strictly modern American

NO need to explain what land and what age these people live in. They have the unmistakable look of America, 1955.

They have the trim, fit figures, the health and vitality of a generation that has a world of food and drink to choose from, but whose sensible modern taste in diet is for the lighter and less filling.

And they are the people, theirs is the taste, for which Pepsi-Cola is made.

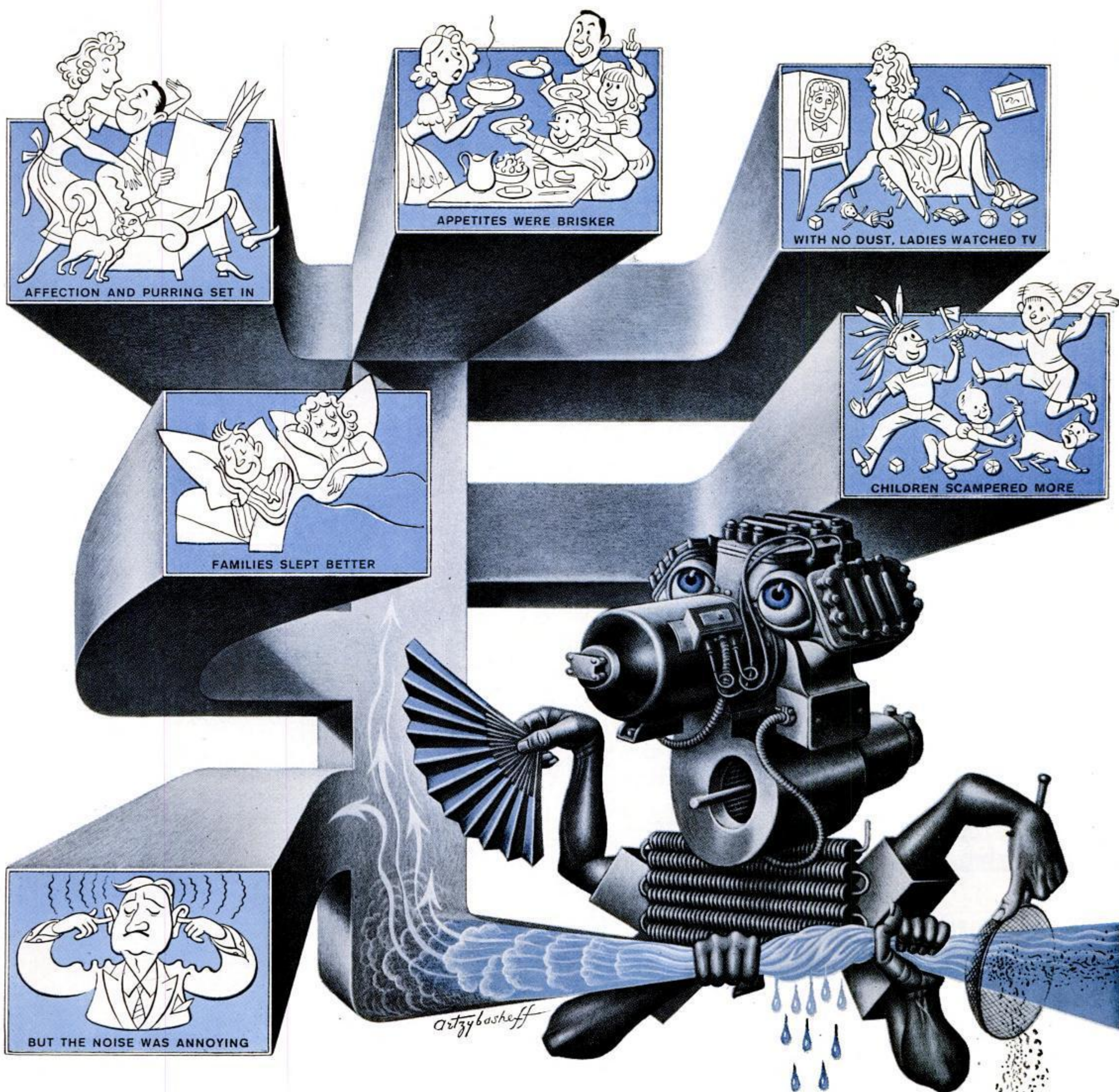
That is why today's Pepsi is reduced in calories. Never heavy, never too sweet, Pepsi-Cola is the modern, the *light* refreshment.

Refresh without filling. Have a Pepsi.

Pepsi-Cola

refreshes
without
filling





DIG THAT REAL COOL CONTRAPTION!

Texas test shows the effects of air-conditioning—and how to use it properly

That controversial creature born of man's fight to beat the summer heat—the air-conditioning machine—is shown here as sketched by Artzybasheff, with a few conclusions as to how it affects people who live with it. The conclusions are based on a recent experiment in Austin, Texas. Under the sponsorship of the National Association of Home Builders and groups representing heating, refrigerating and insulating industries, Austin contractors built a 22-house field laboratory to test 22 different central air-conditioning systems in the 100°-plus heat of Texas summers. One house served as an office for the experiment, which began

last summer, and 21 families paid an average of about \$15,000 each to own and occupy the others.

While engineers studied performance and costs; physicians and psychologists observed the effects on the occupants. They found that families with air conditioning sleep better, eat heavier foods, have better dispositions and stay home more. But there also were some complaints—notably concerning noise. Engineers welcomed the gripes as helpful to the purpose of the test: to teach people who want air conditioning how to go about it and get the most for their money. For a detailed report on this subject, turn the page.

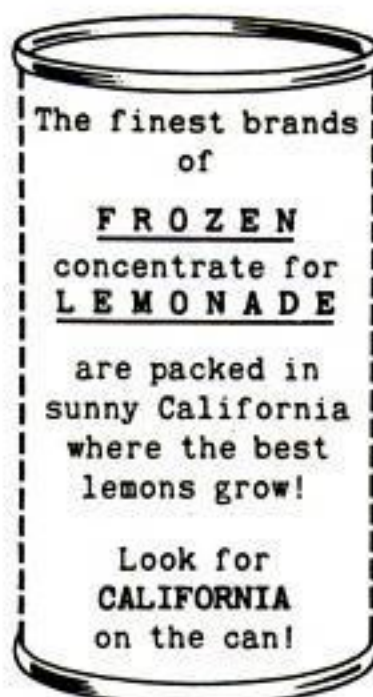


"Time for a Lemonade Lift!"

Refreshing! Lemonade's the beverage that picks you up... without letting you down! That quenches thirst like nothing else! It's ready in seconds with Frozen Lemonade from sunny California. Just open can...add water, ice. Nice mixed with ginger ale or soda!

Costs only 3¢ a glass! Each 6-oz. can makes a full quart. Pick up several cans today. Keep a pitcherful in your refrigerator.

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FROZEN LEMONADE
from sunny California**



LEMON PRODUCTS ADVISORY BOARD, LOS ANGELES, CALIFORNIA



EXPERIMENTAL HOUSES, each equipped with two-ton air-conditioning unit, were built on a treeless Texas landscape, completely exposed to sun.

BEST COOLING FOR LEAST COST

At the Austin experimental development, where the average cost of cooling a house through five summer months was \$109, one air-conditioning unit did the job for only \$57 while another unit, in a neighboring house of similar size, struggled and gurgled through the summer at a cost of \$172. Why this difference?

The engineers had to take many factors into consideration. Some families did considerable baking and roasting in their ovens. Some sat long hours before television sets that radiate British Thermal Units (a measurement of heat) by the hundreds. Some have children who untiringly pop in and out of doors, with resultant loss of cool air. But despite all this the engineers were able to connect cost of cooling with good and bad construction planning. For the prospective home owner the engineers listed in order of importance 15 suggestions for the efficient operation of a cooling unit:

1 *No hot sun should strike window glass.* Houses with the lowest cooling cost generally had shading devices over the windows. A picture window that caught the afternoon sun boosted cooling expense on one house by 15%.

2 *A house should be well insulated against both heat and moisture.* The attic floor should have the equivalent of six inches of rock wool and the walls four inches. Floors, walls and ceilings should have moistureproof vapor barriers.

3 *Ventilation between the roof and ceiling should be adequate.* In summer attic temperatures often reach 150° if the air is imprisoned. Much of this heat radiates into the house.

4 *The size of a cooling unit should be determined by an expert's careful analysis.* A unit that is too small will not do the job and one that is too big will result in poor humidity control.

5 *The house should have a light-colored exterior and roof.* Bright surfaces tend to reflect heat. Dark surfaces absorb it.

6 *Family living habits should be arranged to help the cooling unit.* Humidity and temperature control is upset by the housewifely compulsion to turn the cooler off at night. A kitchen exhaust fan should be used freely when cooking is in progress. Children should be taught to close doors quickly.

7 *Clothes driers should be vented to the outdoors.* A drier releases enormous amounts of heat and humidity.

8 *The air-conditioning system should be installed by an expert.*

9 *The air in the house should move constantly.* The blower in a cooling unit should not be run intermittently. Also the unit should be set to bring in some fresh air from out of doors.

10 *Ducts that carry air from a central unit should be installed wherever they pass through uncooled spaces.* In one house cool air flowing through an uninsulated attic duct picked up 27° of attic heat before it reached the rooms.

11 *The register openings through which air enters should be situated near the outside walls of each room.*

12 *The air conditioner should be so constructed that no water stays on the cooling coils when the machine stops, or so that the air by-passes the coil completely.* Otherwise excess humidity results.

13 *The air conditioner should be built with good insulation and a tight seal between it and whatever heating equipment it adjoins.* Any cold

to be sure.....

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SAUCE**

Ask for A-1 when dining out, too!

HIS "ROYAL HIGHNESS" PAINTS A DISH

WHAT MAKES HIM THINK HE CAN PAINT?

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ANYWAY, THE MODEL IS SOME DISH!

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Only ROYAL Gelatin Dessert
TASTES JUST LIKE FRESH RIPE FRUIT
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for smart, breezy "end-curl" styles
that need no more than 18 curls!



• For "Short 'n Natural" Styles!

• For "Better Behavin' Bangs"!



• For "Long 'n Smooth" Styles!



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the Tip curl permanent!

use Tip Toni these two easy ways:

1 "IN-BETWEEN" PERMANENTS

Tip Toni gives you just enough waving lotion to put *new* curl where old curl fades first... the tips of your hair! Now, with Tip Toni... you can *avoid* those annoying, droopy stragglers, the messy, unkempt look of a "half-gone" permanent!

2 FOR "PARTIAL" PERMANENTS

Tip Toni is just wonderful for bangs and pony-tails... for short styles or long coifs that call for smooth crowns! Tip Toni gives you enough lotion for up to 18 curls; puts your waves *exactly where you want them* for today's smart "end-curl" styles!

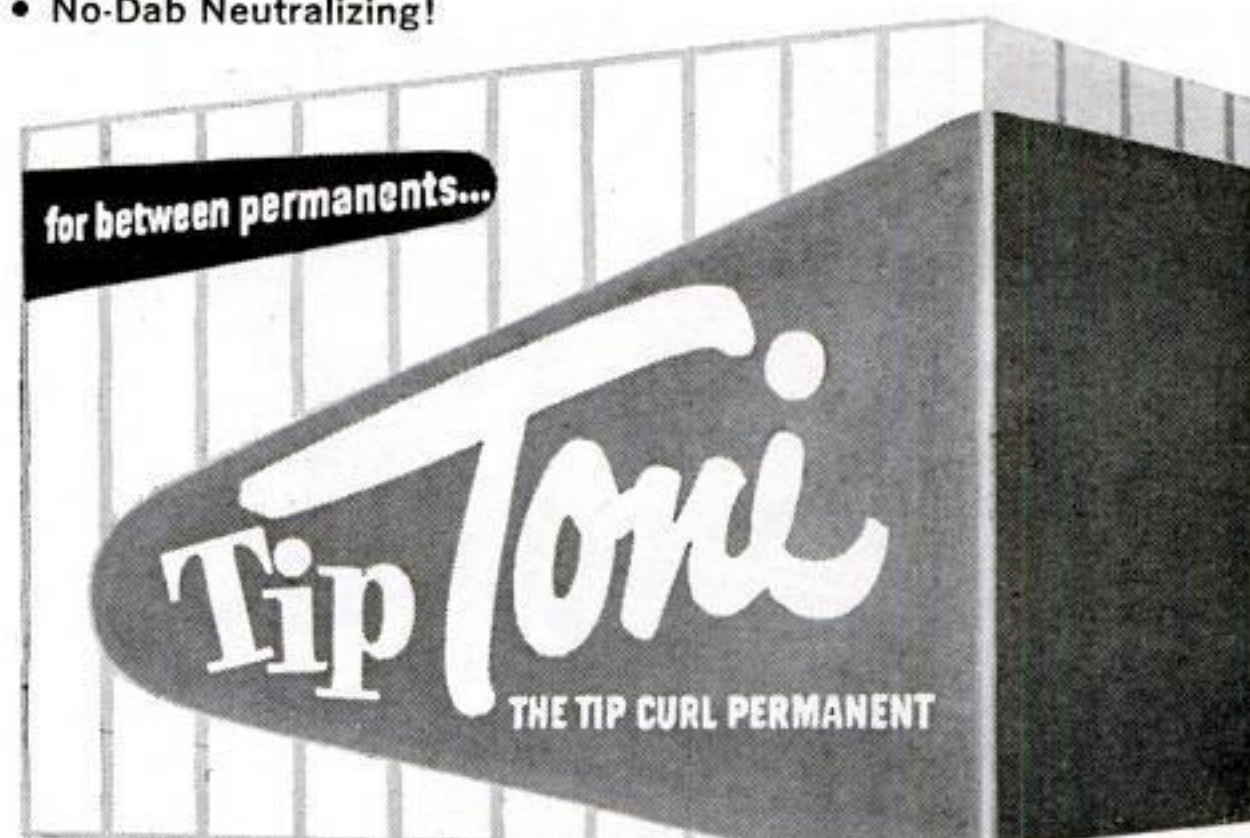
Best of all... new Tip Toni has *every* one of the advantages that is making All New Toni the *most talked-about, most wanted permanent* in the land!

- Fresh Air Waving Lotion!*
- Lanolin-Treated End Papers!
- 10 Minute Waving Time!
- No-Dab Neutralizing!



• For "Between Permanent" Stragglers!

P.S. If you want more than 18 curls,
get an All New Toni with full-size bottle
of Fresh Air Waving Lotion!*



Very Gentle—Super—Regular

Either way you use
Tip Toni... from start to
finish, it's the world's
fastest permanent!

Odor-free...
Frizz-free...
Trouble-free
as a wave can be!

*Patents applied for
©1955, The Gillette Company



Are you really lovely to love?

...Is there an
air of freshness
about you...always?

You'll be fresh as a daisy, even on hot humid days—when you use Fresh Cream Deodorant!

Prove it to yourself this way:

Buy a jar of Fresh Cream Deodorant today. Use it under one arm and continue your present deodorant under the other arm for a few days.

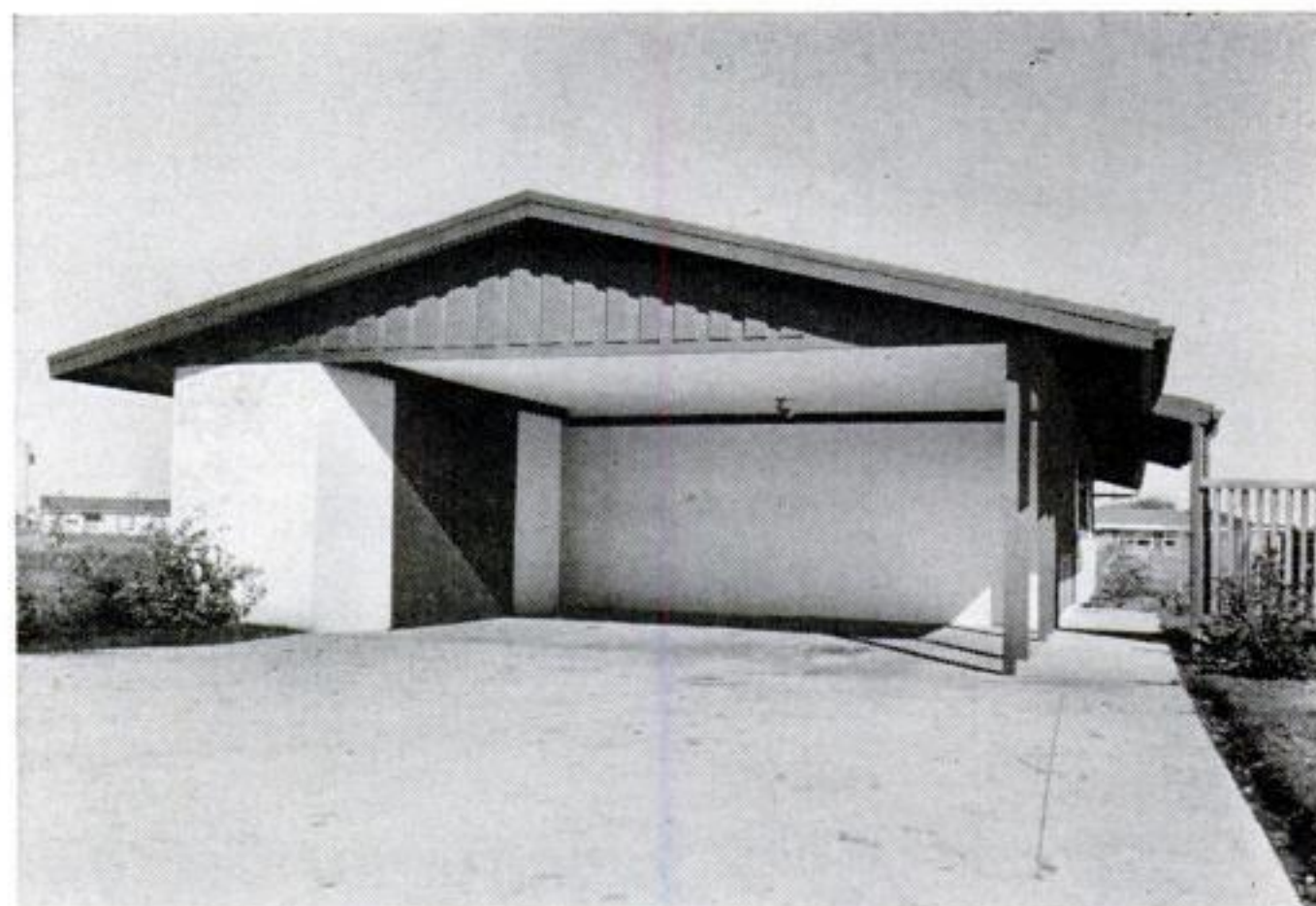
See for yourself which prevents odor best—keeps underarms drier—protects clothing better... makes you *sure* you have an air of freshness *always*.

a *Fresh* girl is always
lovely to love

Fresh is a registered trademark of Pharma-Craft Corporation. Also manufactured and distributed in Canada.



Fresh is extra effective—contains the most effective perspiration-checking ingredient known. Gentle to skin... creamy smooth, not sticky or greasy. Delicately fragrant. Use daily.



IN ITS OWN SHADOW this house has eaves and a carport shading windows and walls. Owner operated cooling unit constantly at cost of \$73 for season.

AIR CONDITIONING CONTINUED

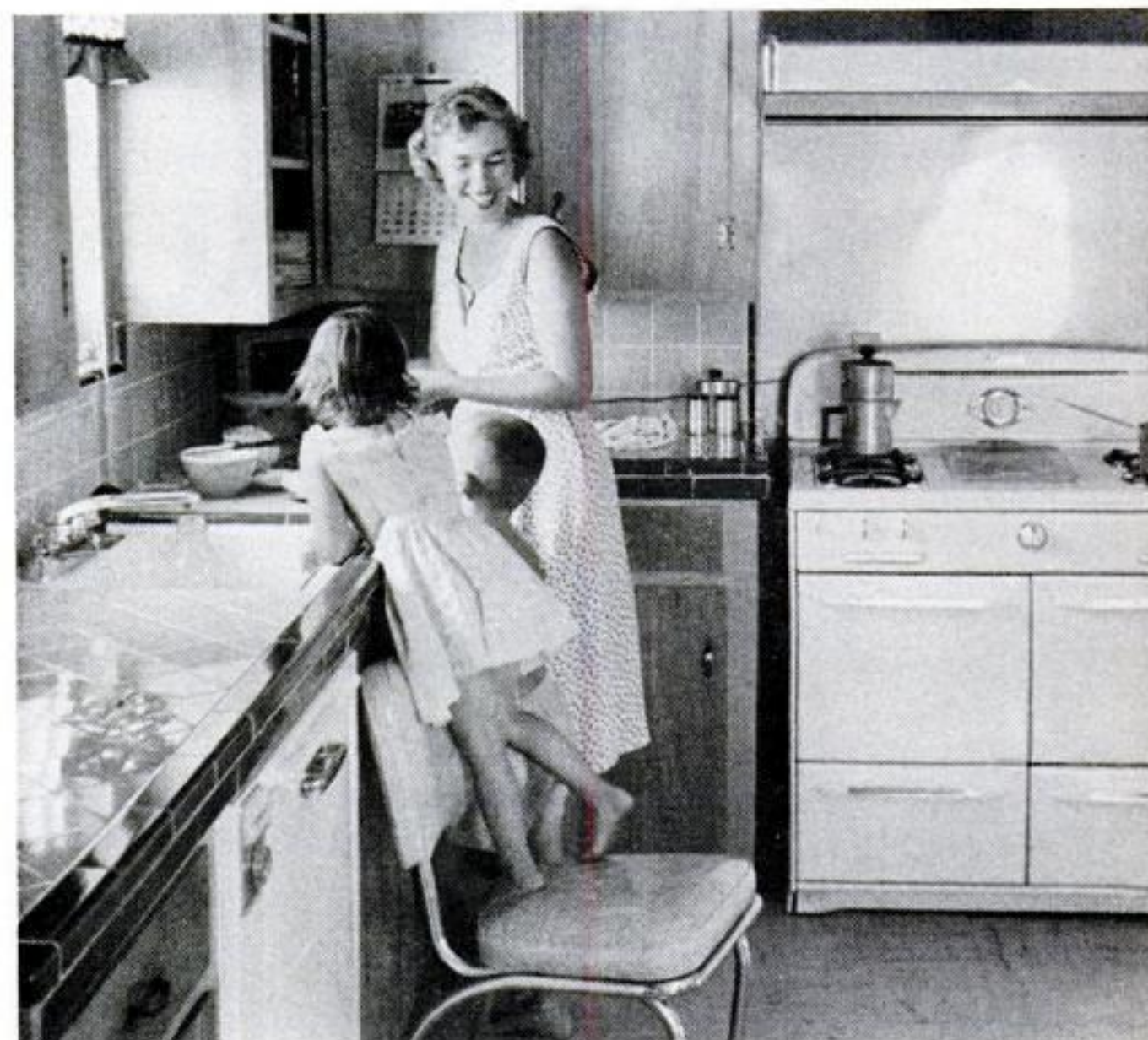
air leaking into most heaters will cause condensation of water, with rust and corrosion resulting.

14 The air-conditioning unit should be built so that the homeowner can do some of the servicing, like oiling the fan and changing the filter.

15 Little space need be sacrificed to the machine. Plenty of neatly cased central units now on the market take up less than nine square feet of floor space.

The noise that some Austin families found objectionable was checked by engineers with sound meters. At various times 19 of the test machines exceeded the FHA's allowable limit of 40 decibels. In rooms situated near compressor units, readings as high as 54 decibels were noted—higher than the noise level in an average office. Because some machines were situated with condenser coils and compressors out of doors, a few families found their neighbors' machines more offensive than their own. The noise was a result partly of faulty installation and partly of bad equipment design. The engineers recommend that wooden platforms built for mounting the equipment be properly isolated from the framing of the house, and they also have stimulated manufacturers to line the cases of the units with sound-deadening insulation.

With final engineering analyses still to be published, the test families are already on record as in favor of their new way of life. Even families with the highest bills are delighted and consider the cost small enough to escape the heat. And families with efficient cooling systems have discovered an extra bonanza: good insulation makes possible a substantial saving in winter fuel bills.

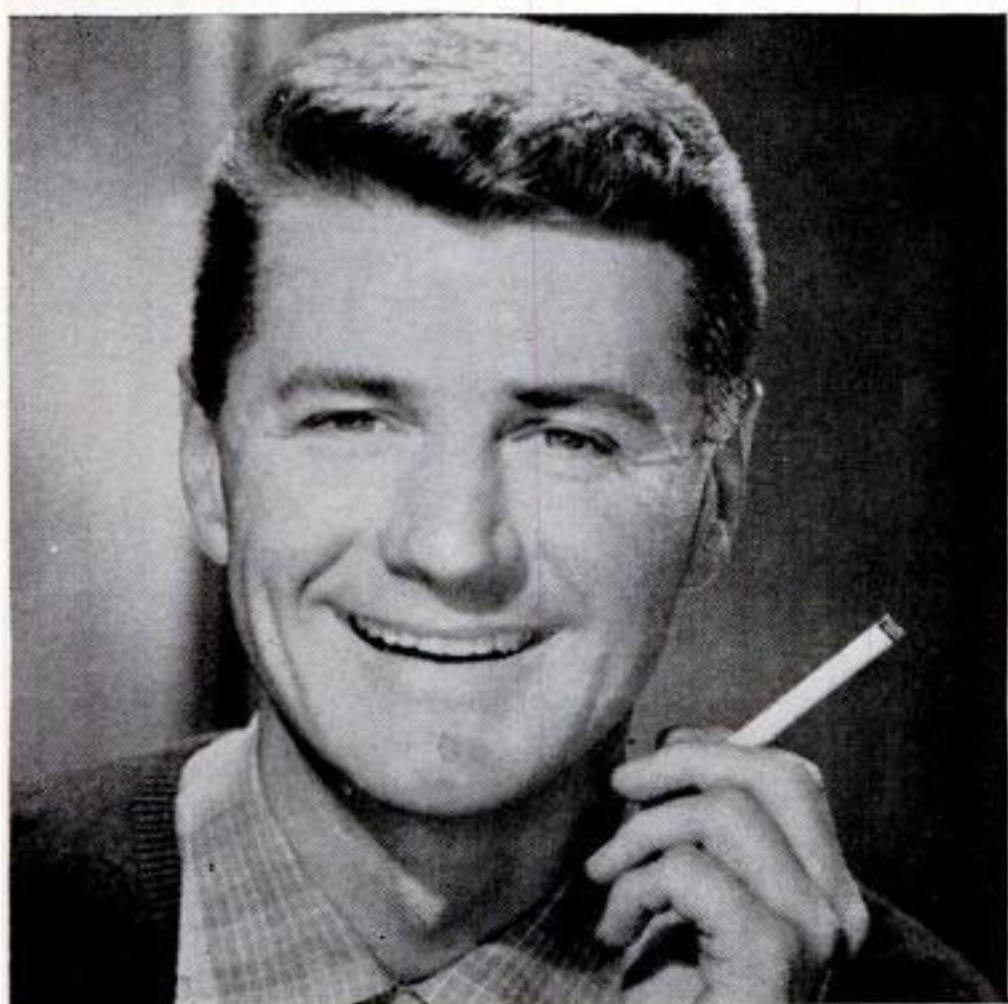


IN A COOL KITCHEN Mrs. C. C. Sansom Jr. bakes a cake, oblivious to the heat outside. She said that she could never be without air conditioning again.



Your voice of wisdom says **SMOKE KENT**

Only KENT has the exclusive Micronite Filter that gives you KENT's extraordinarily smooth smoking



You well might ask this question: When all cigarettes look so much alike, why is KENT so importantly different? The answer is simple...

Only KENT goes to the extra expense to give you the exclusive, scientific Micronite Filter.

Every puff of KENT's custom blend of rich tobaccos comes to you through this filter's unique material.

That's why you get KENT's extraordinary smoothness. It's why you not only enjoy the cleanest-tasting, freshest flavor in a cigarette . . . you *keep* enjoying it, with every cigarette you smoke.

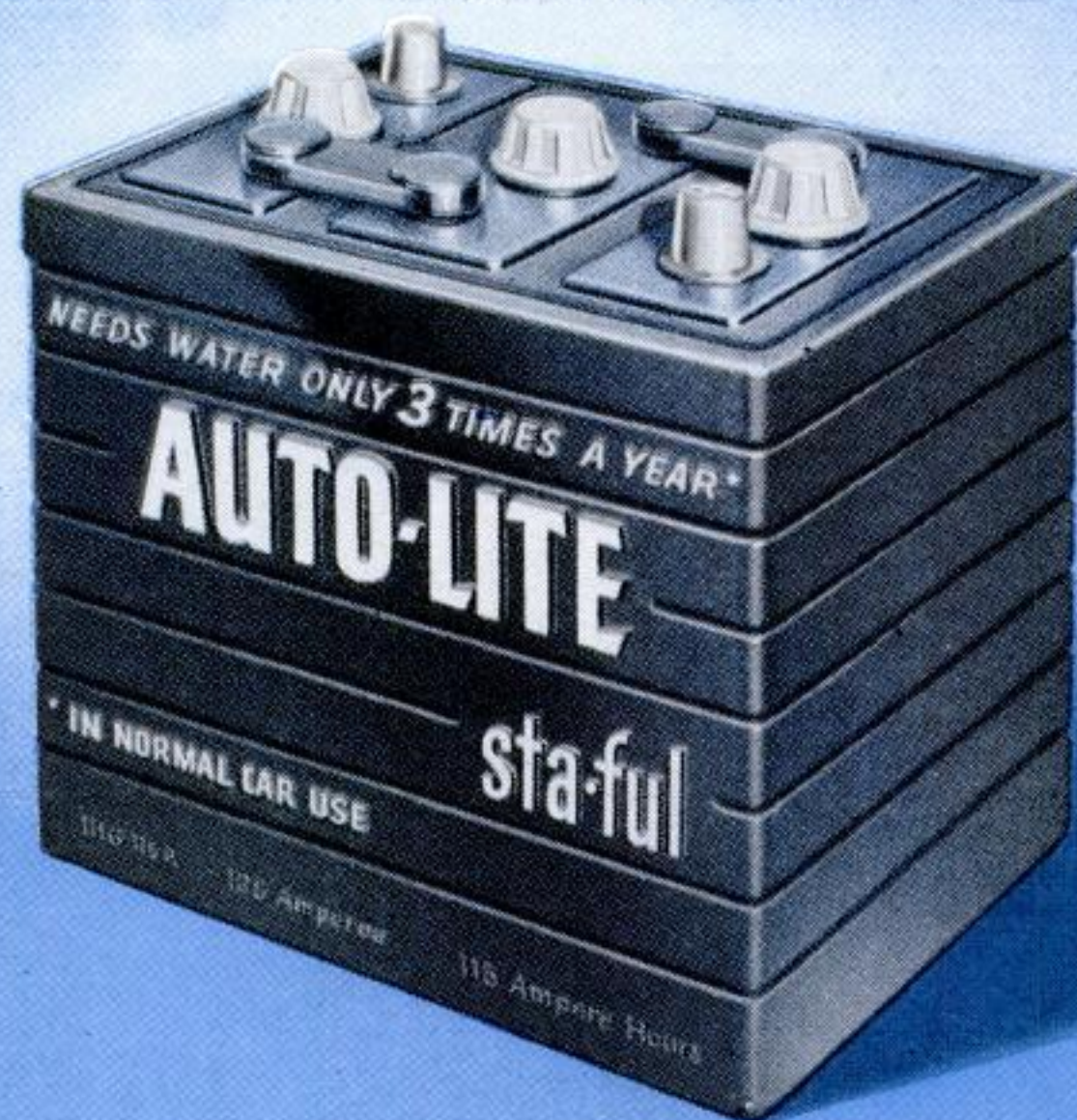
Only KENT can offer you such *complete* smoking satisfaction. Why not try a carton of KENTs, and see?



KING SIZE OR REGULAR
BOTH SAME PRICE

KENT *the only cigarette with the Micronite Filter*

"KENT" AND "MICRONITE" ARE REGISTERED TRADEMARKS OF P. LORILLARD COMPANY



Auto-Lite Sta-ful Battery

needs water only 3 times a year*

*IN NORMAL CAR USE

...lasts longer, too!

Wherever you drive, in any season, you can be sure of quick, trouble-free starts with an Auto-Lite "Sta-ful" battery. The "Sta-ful" stays stronger longer than any ordinary battery because of its special construction. Its extra large liquid reserve (3 times as much as batteries without "Sta-ful" features) keeps "Sta-ful" plates fully covered and protected . . . keeps power at its peak. Get the full story on the Auto-Lite "Sta-ful" battery — the battery that needs water only 3 times a year in normal car use and lasts longer, too. See your Auto-Lite Battery dealer today.

Here's the reason . . . Auto-Lite "Sta-ful" has more than 3 times the liquid reserve of ordinary batteries . . .

Liquid reserve of Auto-Lite "Sta-ful" is over 14 oz.



Liquid reserve of ordinary batteries is less than 4 oz.



Auto-Lite "Sta-ful" plates are fully covered and active

AFTER EQUAL EVAPORATION THIS HAPPENS...

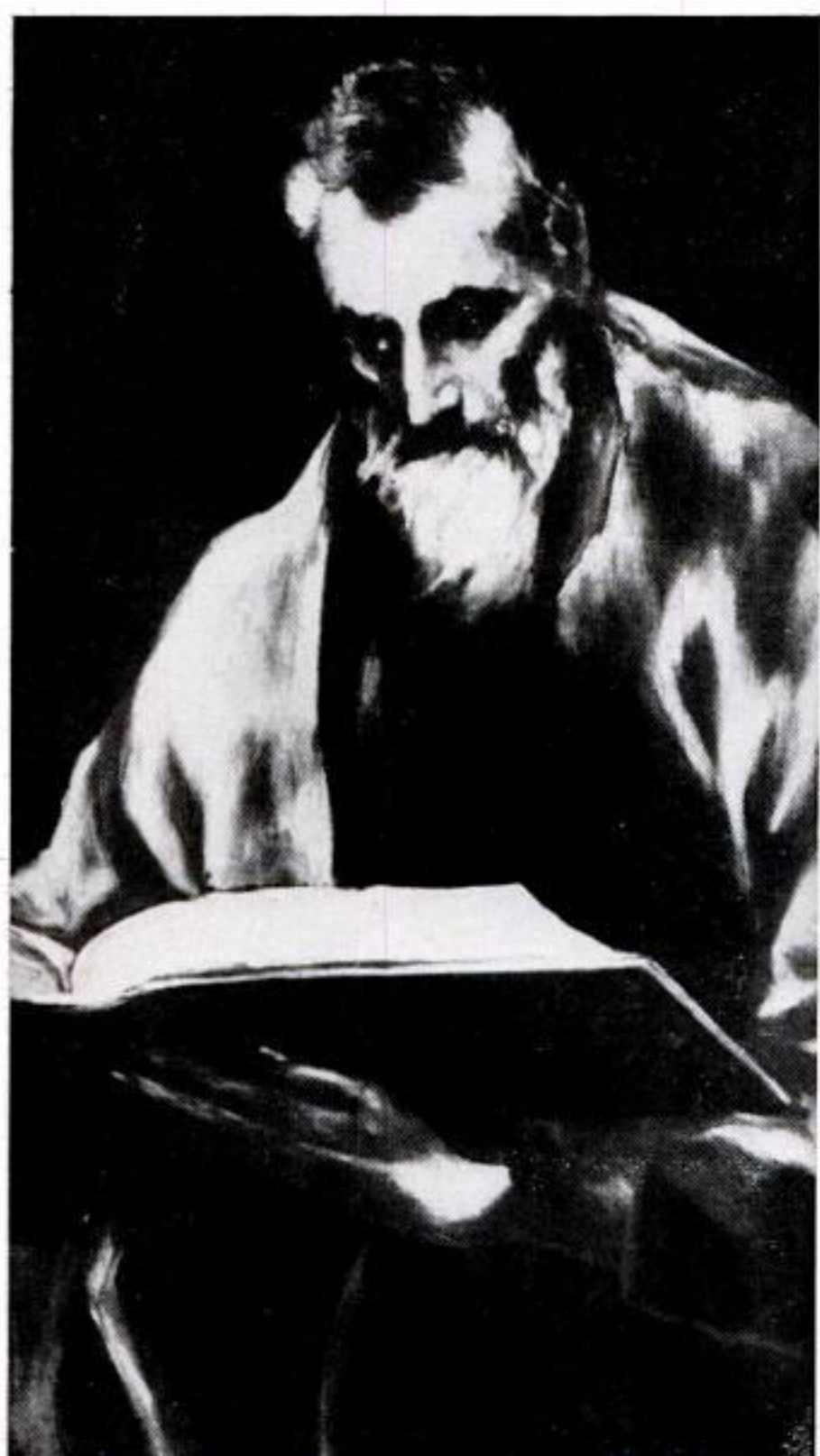


Ordinary battery plates are exposed and partially inactive

Fibre-glass insulation helps keep power-producing material in plates, assures longer life.

AUTO-LITE

AUTO-LITE MANUFACTURES OVER 400 PRODUCTS, INCLUDING SPARK PLUGS, BATTERIES, WIRE AND CABLE, ELECTRICAL SYSTEMS



ST. SIMON WAS PAINTED AS AN INTROSPECTIVE



GRECO'S ST. BARTHOLOMEW HAS DISTANT GAZE

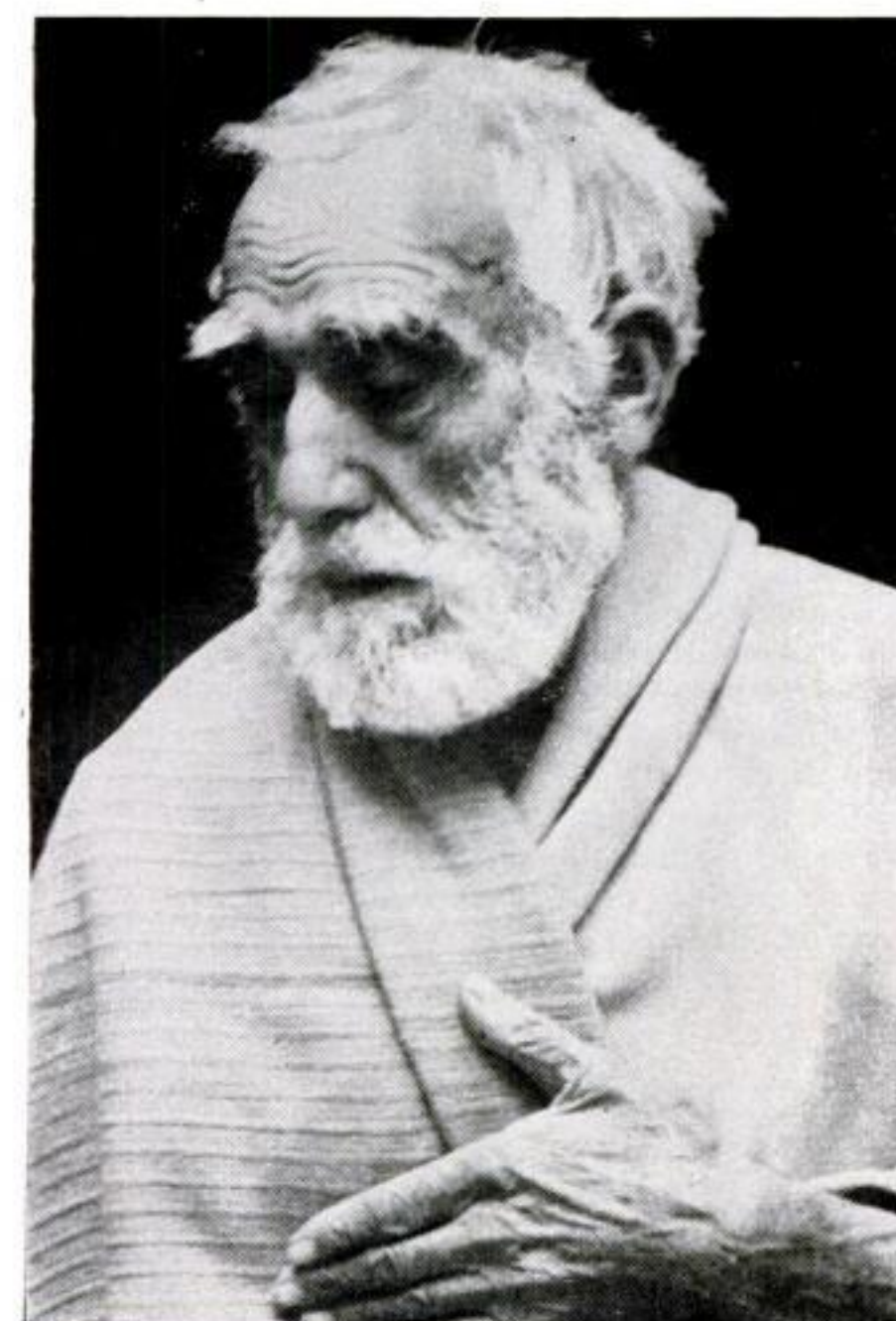
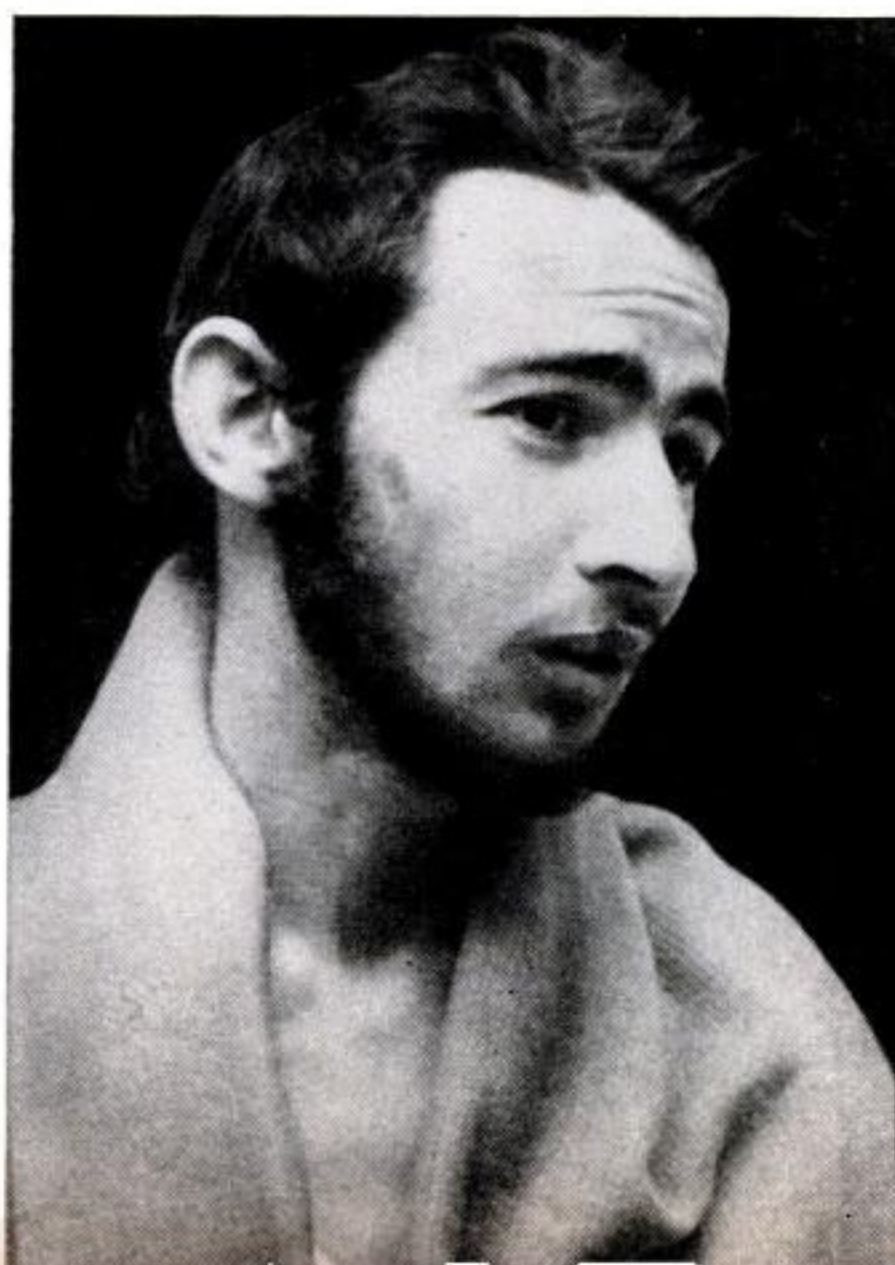
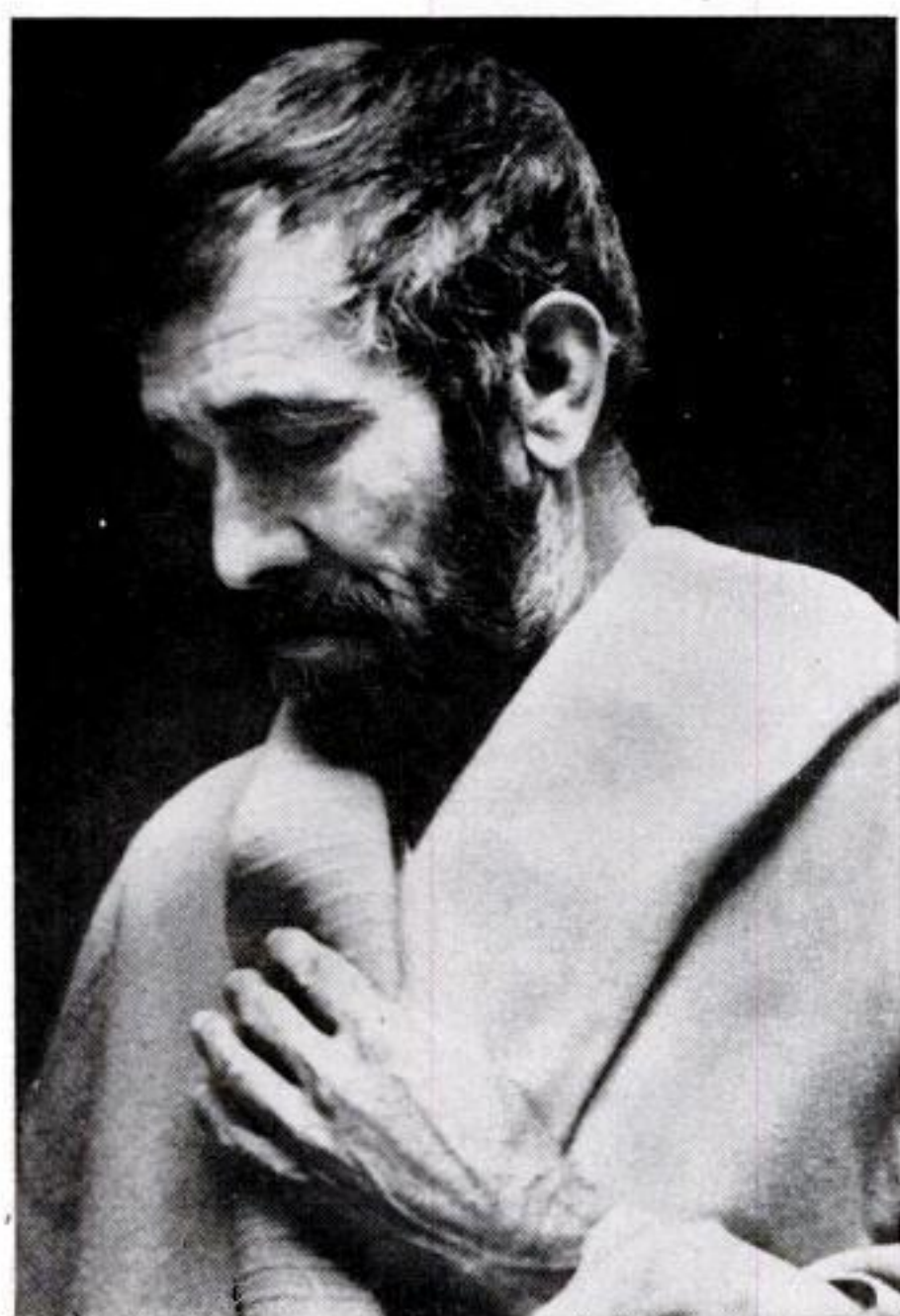


AGED ST. JUDE WEARS A LOOK OF SAD ANXIETY

El Greco's Madmen

A NEW THEORY SUGGESTS HE USED INSANE MEN AS MODELS

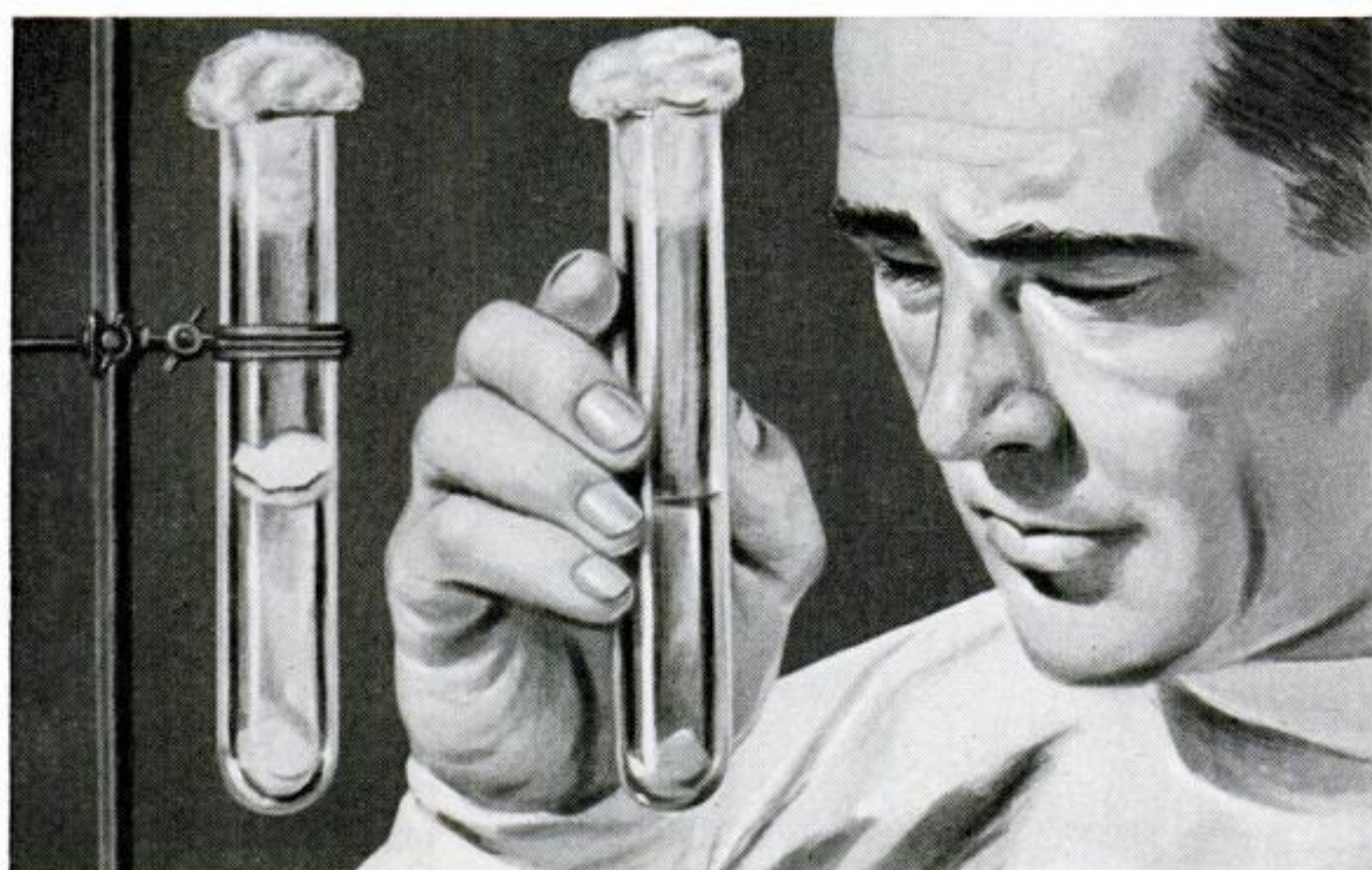
The troubled stares and distorted figures painted by Spain's great artist El Greco have long baffled experts who theorized that he either had astigmatic vision or worked in a mystical frenzy. Recently Spanish Critic Gregorio Marañón came up with a new theory: El Greco used insane people for models. To back up his theory Marañón went to the asylum in El Greco's town of Toledo where he was able to match some of El Greco's "possessed" portraits (*above*) with remarkable look-alikes (*below*).



KILLS 100 % OF ATHLETE'S FOOT FUNGI IN LESS THAN 5 MINUTES

Famous laboratory cultivates millions of Athlete's Foot fungi and reports every single one killed by Absorbine Jr.!

Within seconds after you apply it, you feel Absorbine Jr. go to work. This time-tested stand-by has brought successful relief in a great majority of cases tested under strictly controlled clinical conditions. So relieve the misery of Athlete's Foot—FAST—with Absorbine Jr., America's No. 1 Relief!



Athlete's Foot fungi, shown in laboratory test tube culture (left), may attack your feet any time of year. And, when your toes are moist or irritated in summertime, they're least able to resist these parasitic micro-organisms.



Raw cracks between the toes are "open invitations" to infection. These cracks are where Athlete's Foot fungi get in, spread and infect. Toes redden, itch. Skin flakes off in whitish patches. These, and accompanying pain, are usually symptoms of Athlete's Foot. Get after them—fast—with Absorbine Jr.

But Athlete's Foot germs can be killed—fast! Absorbine Jr. totally destroyed identical Athlete's Foot germs in test tube (right). As demonstrated, fast-acting Absorbine Jr. kills germs that bring misery to millions.

Athlete's Foot fungi can lie dormant for months, then become active and lay you up. For relief of Athlete's Foot symptoms, apply Absorbine Jr. between the toes. Absorbine Jr. kills all the Athlete's Foot fungi it reaches and promotes healing.

And to guard against Athlete's Foot, make daily use of Absorbine Jr. during summer months. It is sold at drug counters everywhere.

Absorbine Jr. also brings relief from muscular aches and pains due to over-exercise, minor sunburn, and non-poisonous insect bites.

W. F. Young, Inc.,
Springfield, Mass.

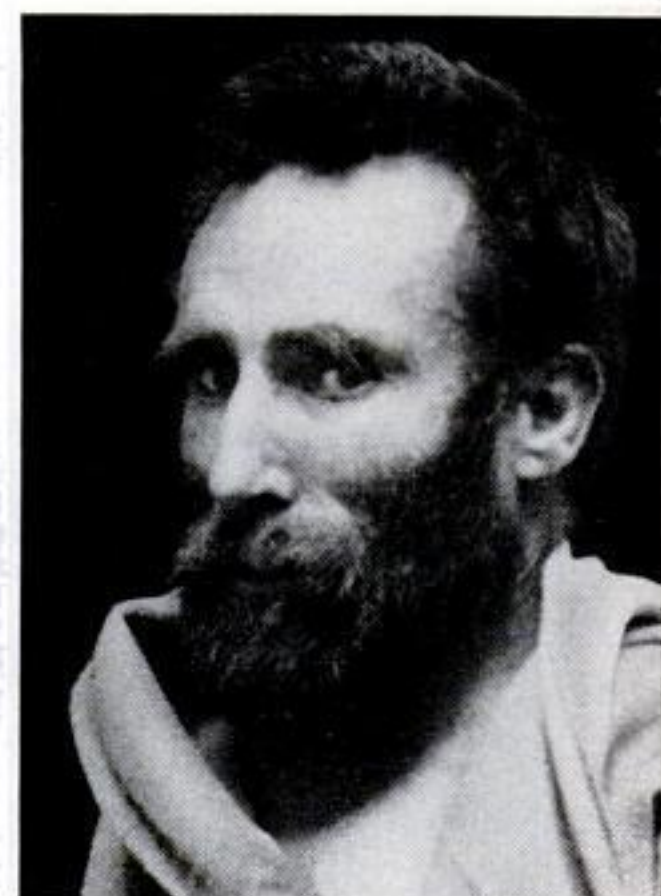
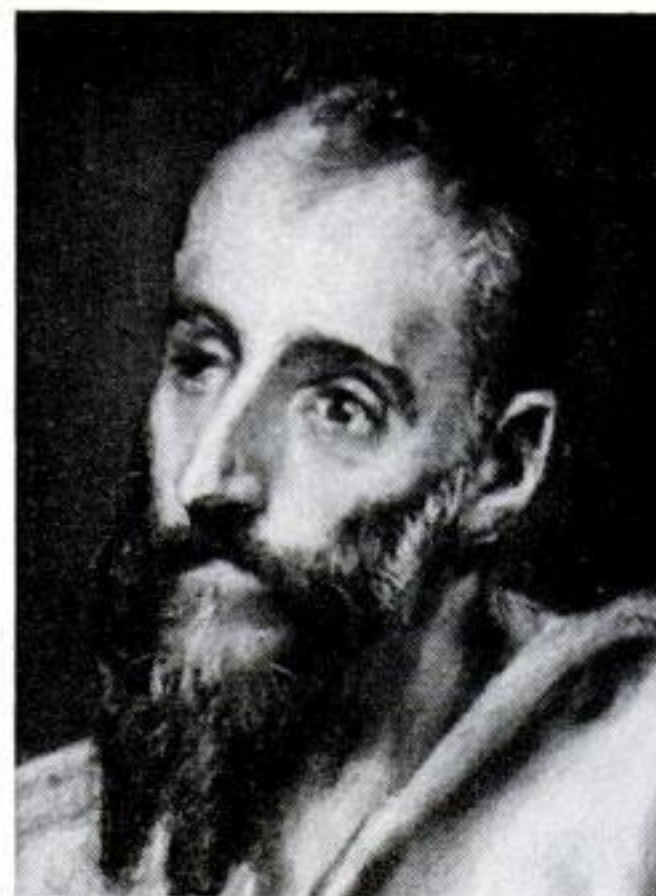
Absorbine Jr.

AMERICA'S NO. 1
ATHLETE'S FOOT RELIEF



EL GRECO'S MADMEN CONTINUED

ARTIST IN THE ASYLUM



HAUNTING EYES and sensitive features of El Greco's St. Paul (left) are matched by mental patient whose beard and hairline also resemble portrait.



TOLEDO ASYLUM houses modern models found by Marañón. He also found records indicating El Greco often visited the asylum in 17th Century.



THEORIST MARANON (left) explains to a friend that artist's use of the insane may have been prompted by old belief that they were possessed by God.

The Towers of the Waldorf-Astoria, New York

11 July 1955

Dear Mr. Luce:

I am glad indeed that you commissioned Courtney Whitney to write his impressions and interpretations of my role in the stirring events which have encompassed the Far East since the start of World War II.

During most of this period he was a senior officer on my staff, as well as a close personal friend, and I know of no one better qualified than he intelligently to discuss those events and correct many of the misrepresentations and false impressions which in past have been spread upon the public record by writers who have either been uninformed or animated by some ulterior motive.

While my assistance to the author in the preparation of his manuscript has been largely confined to permitting him full use of my personal records, his actual participation in the events and his intimate knowledge of the concepts underlying my actions can not fail to ensure the historical accuracy and corresponding value of his work.

Most sincerely,

Douglas MacArthur

Mr. Henry R. Luce
Editor-in-Chief
Life Magazine
New York, N. Y.



With this letter to LIFE's editor-in-chief, General Douglas MacArthur comments on the publication of "MacArthur's Rendezvous with History," written by his aide and friend General Courtney Whitney. LIFE's condensation of the book will be serialized in four successive instalments, beginning in next week's issue, which appropriately appears just a few days before the tenth anniversary of V-J Day.

Andrew Heiskell, Publisher

INTRODUCING NEW

PALMOLIVE *Soft* SHAMPOO

100% NON-ALKALINE!
Will not dry or devitalize hair!



*Lets Hair Behave
and Hold a Wave!*



*As Gentle and Mild
as a Shampoo can be!*



*Leaves More Luster!
More Natural Color!*



*Agrees with the
Healthy, Natural,
Non-Alkaline Condition
of Scalp and Hair!*



*Over Twice as much
for your money as other
Leading Shampoos!*



*Curls are Softer!
Easier to Set!
Stay Set Longer!*



**SPECIAL OFFER
SO YOU'LL GET
ACQUAINTED FAST!**

**30¢ OFF
ON GIANT
12oz. SIZE**

REGULAR PRICE 89¢

YOURS ONLY 59¢ WHILE OFFER HOLDS

We offer this big saving because we know—once you try PALMOLIVE SOFT SHAMPOO, you'll always use it. Tell your friends! Hurry! Regular 89¢ price (even that's a bargain) comes back when limited Special Offer supply is gone.

TODAY...GET NEW PALMOLIVE SOFT SHAMPOO!



RIDING ALONGSIDE ON COW PONIES, MESHACH TENNEY (LEFT) AND REX ELLSWORTH BREAK IN YOUNG THOROUGHBREDS BY MAKING THEM RESPOND TO REINS AND WHIP

COWBOY RACE KINGS

Two Mormons who own Swaps win without wasting sentiment on 'stupid horses'

by MARSHALL SMITH

THE excitement which precedes those rare occasions when two superb horses meet by special appointment has already set in. It will reach a peak, barring an accident or an act of God, on the afternoon of Aug. 31 when the two contestants, Swaps and Nashua, have it out on a winner-take-all basis for \$100,000 at Washington Park race track near Chicago.

Of the two horses Nashua is in the familiar tradition of a plush eastern stable and a plush eastern owner, the wealthy New York financier William Woodward Jr. But Swaps is a strictly unorthodox horse, raised without fanfare on a far from splendid ranch by a man who breaks all the most cherished traditions of bigtime racing, and who even goes out on a limb before a big race. When the Swaps-Nashua match was announced, Swaps' owner said candidly, "I just hope it doesn't come up to a big rainstorm. Then people would say we didn't win fair and square and we'd have to do it all over again."

This man is Rex Ellsworth, a tall, lean, taciturn and extremely shrewd ex-cowboy from Arizona. He is listed as the owner of Swaps and 230 other Thoroughbred horses which, together with two ranches near Chino, Calif. totaling 380 acres, are worth close to \$5 million. But in the approved manner of the old West, Ellsworth has a sidekick, an equally lean but shorter Arizona cowboy named Meshach Tenney, who has been with Ellsworth ever since the days when they roped calves and broke wild horses together in the Gila valley. Tenney has a share in the ranches and race horses and the two are actually partners, even though they have never bothered with a written agreement. Tenney is the trainer for Swaps and all the other racers, and the two men think almost identically—especially on the subject of how to win races.

They outrage all the romantic notions that kings and milkmen and people from Kentucky have about horses. After riding hundreds of

Dish-Quik®

gets dishes done double-quick!

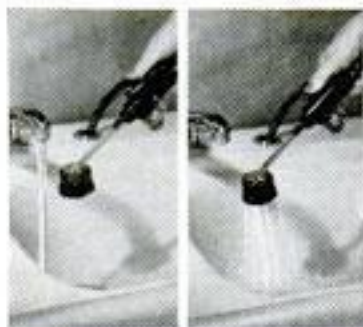
THE ALL-IN-ONE
FAUCET
DISHWASHER!



RECOMMENDED BY
★
Guaranteed by
Good Housekeeping
★
NOT AS ADVERTISED THEN

It's always ready...at your fingertips!

No wonder you get dishes done double-quick with Dish-Quik! It's your dishrag, dishpan, soap and rinse all in one handy package and *always* ready for just a pan or two, or all the dinner dishes. Billowy suds, all-nylon brush and hottest rinse . . . *automatically* controlled at the fingertips of one hand. With Dish-Quik you wash dishes *as you use them*. And you're through with rough and reddened hands . . . because Dish-Quik keeps your hands out of hot, soapy water. Even if you own a fully automatic dishwasher, you'll find Dish-Quik handy for pre-washing and for odds and ends. Ask for Dish-Quik today wherever plumbing goods are sold. Available *two ways* for every home in America to enjoy:



THE DISH-QUIK SECRET
...one-hand fingertip control! Turn on the faucet and you're ready to go. Now press the lever: water flowing from the spout is diverted instantly to Dish-Quik.



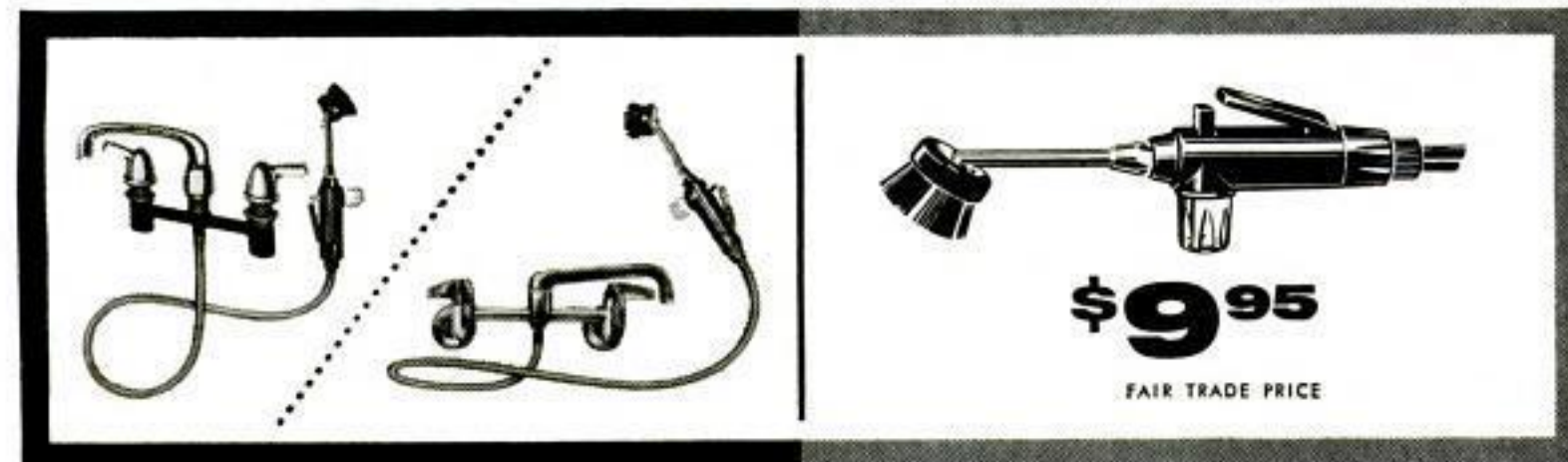
FOR INSTANT SUDS
...just tap the button. Fresh, clean suds every time! The transparent cup, filled with any good liquid detergent (such as Joy) holds enough for two days or more.



GETS DISHES CLEAN
...really clean...even pots and pans! And no more "sour" dishrags! The sturdy brush is always "sweet" because it's all-nylon, rinsed clean with every use.



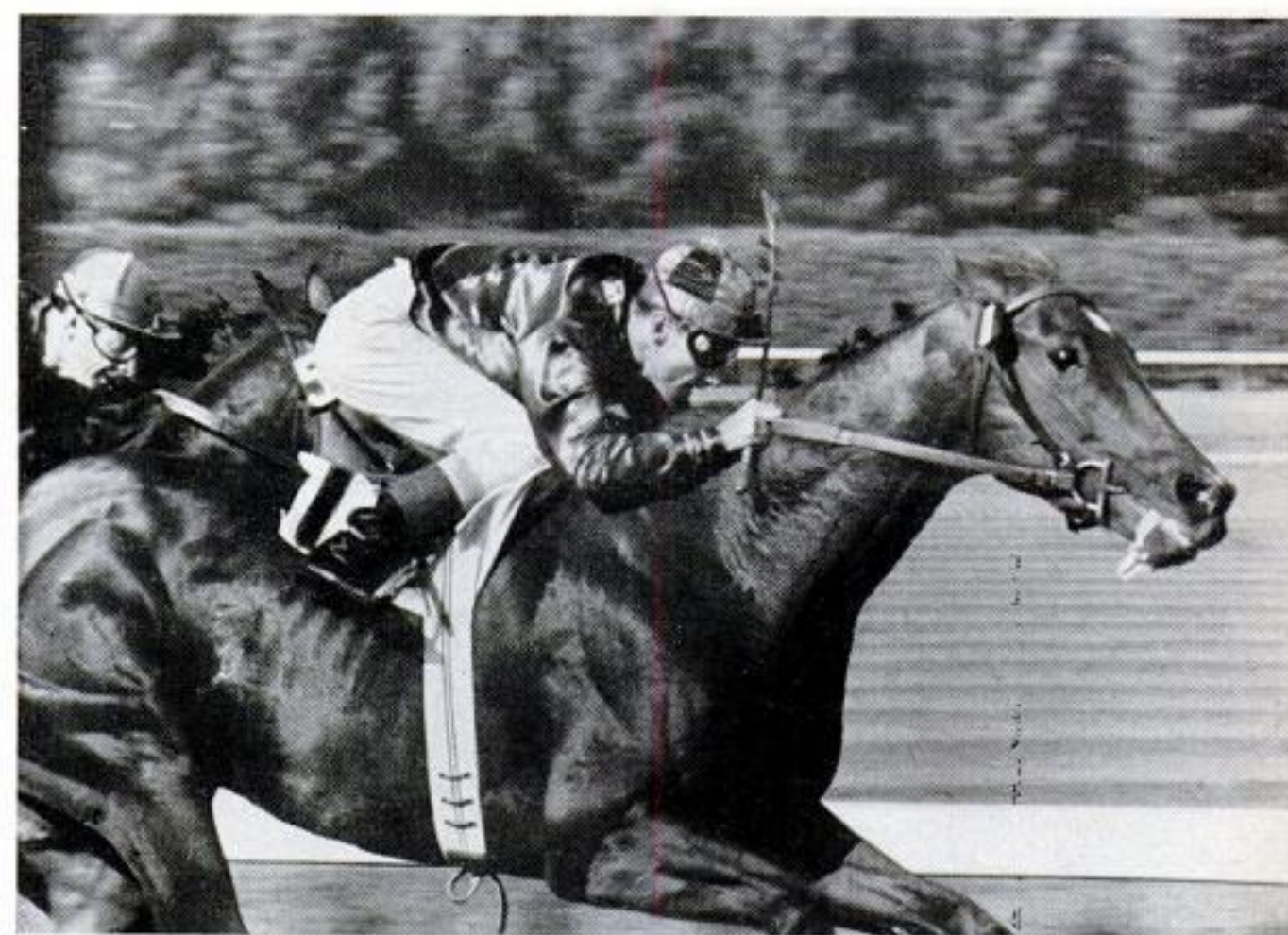
DISHES AIR-DRY
...sparkling bright, without wiping, because Dish-Quik rinses as hot as you wish! It's a powerful spray of clear, fresh water you'll use many times every day.



1 As standard equipment on well-known brands of sink faucet units. Shown above are only two of many types for every kind of installation. Prices for complete faucet units with Dish-Quik depend upon make and model of the faucet, averaging about \$29.50. Dish-Quik is often sold under the brand name of the faucet, but you can be sure it's Dish-Quik by the clear detergent cup on the handle.

2 Separately, to replace any of these plain water sprays. Replace it yourself in minutes. Make your old spray faucet exactly like the newest models! If your dealer is not supplied, send his name and address and your own, with \$9.95 check or money order. We will mail Dish-Quik to you. Add 3% tax in California.

The Dish-Quik Co. 1700 E. 58th Place, Los Angeles 1 [A division of Modern Faucet Mfg. Co.]



SETTING A TRACK RECORD at Hollywood Park, Swaps drives past the leaders to win \$100,000 Californian stakes. Jockey never had to use whip.

COWBOY HORSE RACERS CONTINUED

them for thousands of hours across lonely wastes and trying to figure out what makes them tick, they are convinced that horses are not only unaffectionate but unintelligent. "I just know for sure that they are stupid," says Ellsworth.

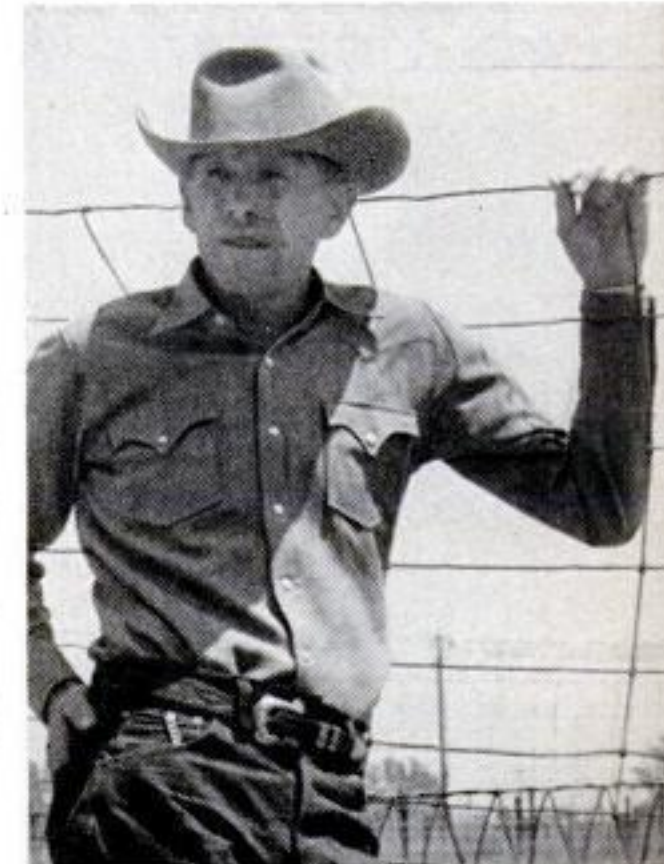
"They are dumber than a dog or even a mule," he says. "A dog will dig to water where a horse will stand there and choke to death, and if a mule gets hung up in a wire fence he will wait for help where a horse will tear its leg off trying to get loose. Horses do things only because they are too dumb to figure out a way not to do them. When they nicker it is because that lump of sugar is there. They cannot recognize people by sight. A mare cannot even recognize her own foal without smelling it. The most you can say for them is that they like the company of humans and other horses. They get lonesome—but they will slash and kick and bite each other over a handful of feed or a drink of water."

No frills or folderol

ELLSWORTH and Tenney handle their high-priced stock in an efficient impersonal way with no frills or folderol. Unlike other race-horse people they personally break their own yearlings, maneuvering their trained cow ponies with one hand while teaching the young Thoroughbred galloping alongside to respond to the reins with the other. All the while, as they stop, start, wheel and turn, kicking up a suffocating cloud of dust, a whip flicks back and forth, sharply emphasizing the lesson.

When they finish, the horse is thoroughly and completely disciplined. As a result Ellsworth and Tenney have only well-behaved, tractable Thoroughbreds in their barn. This enables them to do strange and unusual things. Instead of walking their horses for half an hour after a workout as other stables do, they put a boy on them bareback and jog them five times around a figure 8 ring. They think

CONTINUED



RELAXED OWNERS of Swaps and other Thoroughbreds are Meshach Tenney (left) and Rex Ellsworth, who are as informal and efficient as their ranch.



ONE LONG DRINK THAT'S ALL TOO SHORT!

To see how *very* delicious and refreshing a Collins can be, make it with Smirnoff Vodka instead of gin. You really *taste* the fruit in a Vodka Collins made with Smirnoff. *All* fruit juice, tonic and soft drinks are especially delicious with Smirnoff, because it lets you taste the other ingredients, brings out flavors you never knew were there!

it leaves you breathless...

Smirnoff
THE GREATEST NAME IN **VODKA**

80 PROOF. MADE FROM GRAIN. STE. PIERRE SMIRNOFF FLS. (DIVISION OF HEUBLEIN), HARTFORD, CONN., U.S.A., FRANCE, ENGLAND, MEXICO

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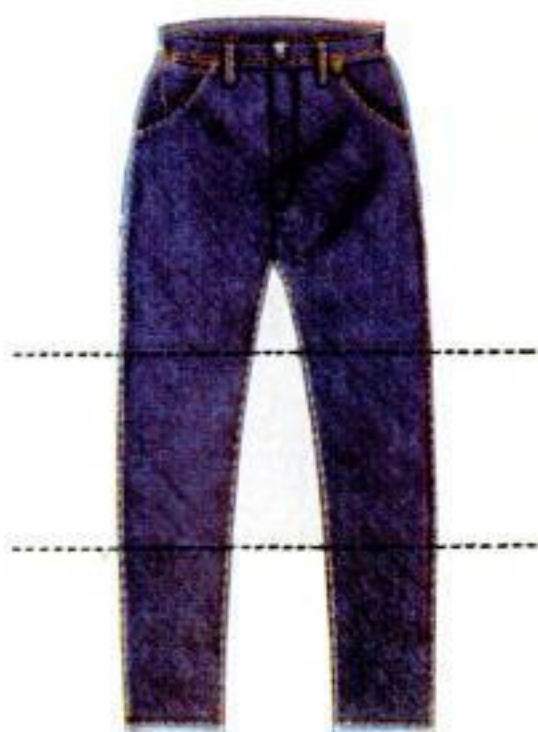
A **NEW** Wrangler by **BLUE BELL** with reinforced knees that outwear the jeans!

Good news for Mothers! At last—here are jeans with knees that outwear the rest of the garment! They're the new Blue Bell Double-Knee Wranglers with the exclusive "Knee Zone" that's good for the life of the jeans. No more mending and patching worn knees! Blue Bell Double-Knee Wranglers also have the trim, slim, authentic Western cut that champion cowboys prefer for comfort and are made of the heaviest Sanforized denim available for long, long wear. Zipper closure. Odd and even sizes 4 through 12, thrift-priced at only **\$2.98**.



Here's why...

Blue Bell's exclusive "Knee Zone" is reinforced over a $5\frac{3}{4}$ " x $9\frac{1}{2}$ " area—more than 2" longer than ordinary reinforcements, to allow for growth and extra wear.



Perfect with these new Wranglers are handsome Blue Bell Wrangler shirts in a cheerful array of solid colors, stripes, plaids. Sizes 2 to 16, from **\$2.98** to **\$3.69**.



look for the Blue Bell Qualitag—your money-back guarantee

Long-wearing, low-priced Blue Bell casual clothes for everyone in your family

At your favorite store—or write Blue Bell, Inc., Empire State Building, New York 1, N. Y., for name of your nearest dealer.



SHOEING HIS OWN, Trainer Tenney believes he can do better than professional blacksmiths because he knows his horses and spends more time on job.

COWBOY HORSE RACERS CONTINUED

the traditional cooling-off method is just plain unnecessary. Their method saves time and money, both of which Ellsworth and Tenney respect. If a horse should step out of line, he gets the equivalent of a quick trip to the woodshed and promptly snaps back into line.

The two men discipline themselves as well as their horses. Being Mormons, they do not drink coffee, tea or alcoholic beverages. They do not touch tobacco or take the name of the Lord in vain. Although they have been rubbing elbows with pari-mutuel machines for years, they have never placed a bet on a horse. Ellsworth laughs this off by saying, "I can't afford to bet on horses. I've got to feed them."

Their one vice is an irresistible desire to be photographed in the winner's circle along with one of their horses. It is a weakness which they have been exposed to constantly this year, having won 55 races and more than half a million dollars. But up until the moment that the camera clicks they show admirable restraint. During a race they sit like stone figures with binoculars glued to their eyes, the two most composed people in the entire grandstand.

After one of his horses, El Drag, set a new world record for seven furlongs at Hollywood Park this spring, Tenney showed no undue emotion. "People can't understand why I don't come back grinning if I win and cussing if I lose," he said. "If the horse runs his best, that's all that matters." The day before the \$100,000 Californian stakes, with Swaps' regular jockey unavailable and a decision to be made on whether to run him or not, Meshach Tenney finished his morning chores at the barn with a relaxed shrug.

"It's peaceful here," he said. "I sleep here sometimes. I hate hotels. Don't like the smell of them." He wore spurs, a string tie of bright blue, a fringed buckskin jacket and cowhide leggings. "Rex Ellsworth made these for me," he said, pointing to the leggings. "He learned leather work back in Arizona, and he makes them better than anybody else. Made this jacket too. I found me a jacket that fit 20 years ago and he's been cutting from the pattern ever since. He made that saddle over there. It's his own design. Keeps me from getting bowlegged."

Tenney excused himself and sauntered toward the tack room on unbowed legs. "I've got to tack on a shoe," he explained. He tied on a blacksmith's apron which he said Rex had made and, jamming a stalljack into the dirt, began hammering on a horseshoe. He explained that Rex did most of the shoeing until he got too busy running the ranch. Tenney fitted the shoe carefully to a hoof, drove the nails and rasped them smooth.

CONTINUED



*"It's good to hear your voice, dear.
You don't know how we miss you!"*

When the family is separated, there's nothing quite so heart-warming as a talk together by Long Distance.

Just hearing those familiar voices helps to lessen loneliness. And it's good to know that all is well—at both ends of the line.

Long Distance is quick. Easy to use. And the cost is small wherever you call. Why not call tonight?

LONG DISTANCE RATES ARE LOW

Here are some examples:

New York to Hartford	45¢
Cincinnati to Buffalo	85¢
Dallas to New Orleans	95¢
Kansas City to Denver	\$1.05
Philadelphia to Milwaukee	\$1.20

These are the Station-to-Station rates for the first three minutes, after 6 o'clock every night and all day Sunday. They do not include the 10% federal excise tax.

CALL BY NUMBER. IT'S TWICE AS FAST.

BELL TELEPHONE SYSTEM





Dandruff on shoulders is excessive dandruff... a sign your scalp needs care

DANDRUFF

Why it may be
"the beginning of baldness"...

We don't claim miracles. We can't prevent baldness. Nor do we believe anyone can. But you should know the following facts about dandruff.

Dermatologists, while differing in their views as to causes of baldness, say that the condition symptomized by excessive dandruff *does* frequently lead to baldness.



1st STAGE:
Spores of Malassez

Seborrhea

Dandruff commonly arises from a disease of the scalp called *seborrhea*. Many leading dermatologists say that a causative agent of seborrheic dandruff is a tiny parasite called the *Spore of Malassez*—also known as *Pityrosporum Ovale*. In most men who have it, seborrhea progresses through three stages:

1. Dry white scales flake off your scalp, drop to your shoulders.
2. Moist, sticky scales appear on scalp. In many cases, hairs begin to die.
3. "Choking" of hair roots with fatty substance from glands, dead cells and dirt may occur. Result is increasingly "thin" hair, often *baldness*.

A scalp hygiene program: the Kreml Method

Watch your general health; if you're "run down," see your doctor. Apart from that—give your hair and scalp the *right kind of care*. Here is an easy-to-follow home program—the Kreml Method—used professionally by leading barbers and hairdressers:



2nd STAGE:
Bacilli shown
may be present

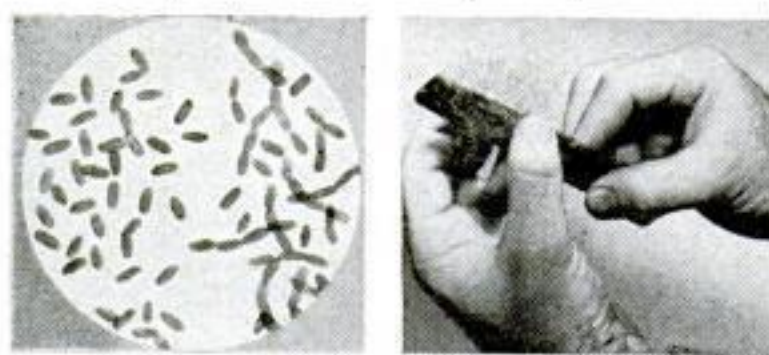
TODAY, get a bottle of Kreml Hair Tonic. And make sure you have a good

shampoo on hand. TONIGHT, start the Kreml Method of treatment. Shake Kreml Hair Tonic *generously* on to your head. Massage your scalp vigorously.

Next, apply shampoo. Work up a thick lather—*without putting any water on your head*. Now, rinse with water. Lather again. Rinse. Dry your hair thoroughly. Shake on Kreml Hair Tonic—massage it in—comb hair in place.

Tomorrow morning—and every morning: Shake on Kreml Hair Tonic—rub it in—comb hair in place. Kreml Hair Tonic contains *just enough* oil to hold your hair the way you like it. There's no greasy, plastered-down appearance.

Improvement in condition of hair and scalp should come quickly. In more



3rd STAGE: Bacilli shown may be present.
Hair growth may be affected

stubborn cases, repeat the Kreml-and-shampoo treatment again.

Inhibits growth of bacilli

There is no known permanent "cure" for seborrheic dandruff. But Kreml Hair Tonic *does* inhibit the growth of bacilli and of the Spores of Malassez. And Kreml *has* helped thousands of men. Letters tell us so!

Money-back offer. Try the Kreml Method faithfully. If you are not entirely satisfied, mail Kreml label to J. B. Williams Company, Glastonbury, Conn.—tell us what you paid—and we will gladly refund your money.

Get Kreml Hair Tonic today. See how quickly Kreml makes your head *feel* better and *look* better!

KREML HAIR TONIC

COWBOY HORSE RACERS CONTINUED

Shoeing horses is a task that other race horse people leave to blacksmiths. The insistence of Ellsworth and Tenney on doing it themselves has kept alive a smoldering war with the powerful race track blacksmith union. In Chicago one year, when the smithy threatened to go on strike because of them, the Washington Park management pleaded with them to desist. They refused to stop shoeing but offered to withdraw their horses from the races. They had reasons other than saving the \$15 blacksmith fee: "We take pains with a shoe where the others are hurrying to get on to the next horse."

But basically the two men just like doing with their two hands everything there is to do with a horse. "I enjoy every nail I drive, every lick I hit. I can't get on my pony enough or manipulate him enough, no matter how tired I get," says Tenney. Ellsworth feels the same way.

The bond between Rex Ellsworth and Meshach Tenney amounts to more than a deep-set obsession with horses. In trying to explain it Ellsworth fumbled for words and then said simply, "If Meshach needed my right arm, I would give it to him." They were born in the same year, in 1907, Ellsworth being one day older. They share a common heritage in that their fathers, both devout Mormons, migrated south from Utah.

At the age of 8 Tenney came to live with the Ellsworths on their ranch near Safford, Ariz. He and Rex went to school together and sat in the same classroom. They inhabited a tract of mesquite and cactus which began six miles south of the Ellsworth home and extended for another 20 down the long, dry San Simon wash.

The horses on the Ellsworth ranch were about as wild as horses ever get. Range-bred, they were allowed to run free in the hills for six or seven years before being touched by human hands. In the dusty corral by the bunkhouse, battles raged periodically between wild horses and men in leggings and spurs who looked limber in the saddle and stuck there despite all the pitching and squealing and fishtailing. By the time Rex Ellsworth was 16 he had won a hundred such battles. "I was thrown a time or two," he admits, "but the horse had to work at it."

Horses have no sentiment

NO matter how tractable a horse seemed, Ellsworth and Tenney learned never to grow careless around one. "Horses have no sentiment, no reasoning power whatever, just instinct," says Ellsworth, "and their instinct is unpredictable."

At 17 Rex Ellsworth took charge of his father's cow outfit with Tenney as his first assistant. His father had land and cattle but never had much actual cash. They were running about 1,000 head on the open range where cattle can roam at will. At roundup time Rex's younger brothers, Reed and Heber, came out to help. They killed and cooked their own beef, hanging it outside at night and putting it in a bedroll by day to keep it from spoiling. They rode up to 30 or 40 miles a day, a chore hard on men and brutal on horses.

A horse rested four days for every day it worked, and with a rider using a different horse each day it was easy to spot the advantage of a fast pony over a slow one. A fast one ran and caught cattle more easily and consequently did not wear out so fast. While Meshach and the others joked and argued about which horses were faster, Rex, who had bigger dreams, envisioned a range full of horses that could fly. He became hipped on the subject of breeding faster horses. He subscribed to *The Blood-Horse*, a publication devoted to the breeding of Thoroughbreds, not with any idea of raising race horses but of crossing Thoroughbreds with range stock to get faster cow ponies.

On his long rides he sketched a mental picture of what a horse should look like. It had to be long, high and wide—long and high for a big, ground-eating stride, wide in the hindquarters for power. It had to have long, straight, driving hind legs and low hocks and knees. From experience on the range he wanted no calf-kneed horses; they went limber after two or three hours' work and began stumbling. "I've seen many a man hang his saddle on a tree and walk home because his horse fell," he said. "I did it once myself. There's no hitch-hiking out there."

Rex Ellsworth had no chance to put his theories into practice before getting a call that comes to all able and willing young Mormon men. At 19, a few months after marrying Nola Ferrin, he was told by the bishop that he was to go on a mission teaching the gospel and making converts. "I like to fainted," he said when he heard that South Africa was his destination. In the summer of 1927, paying his own expenses, he set out for Cape Town.

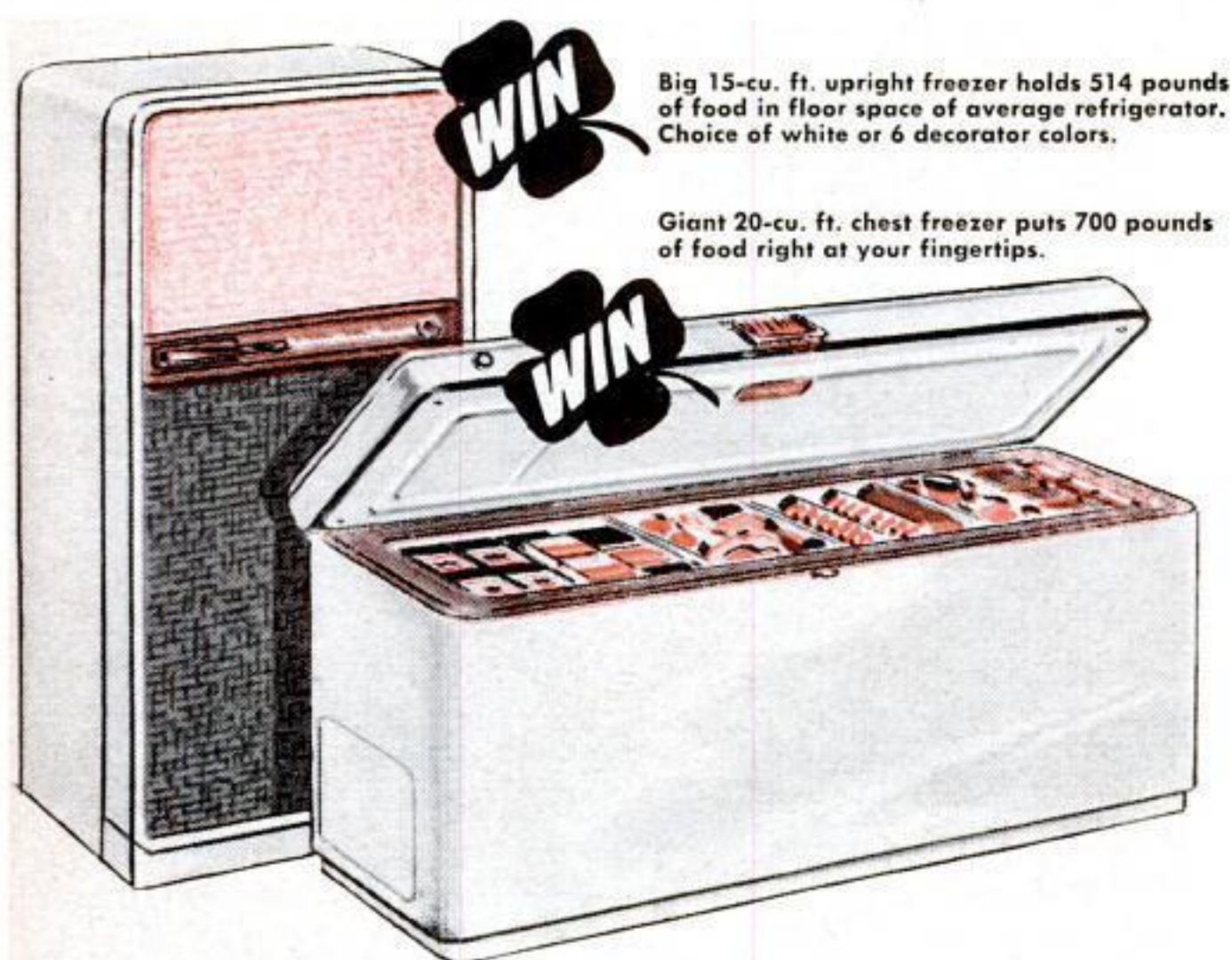
In South Africa he made his calls on a bicycle, which to a cowboy

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INTERNATIONAL HARVESTER'S

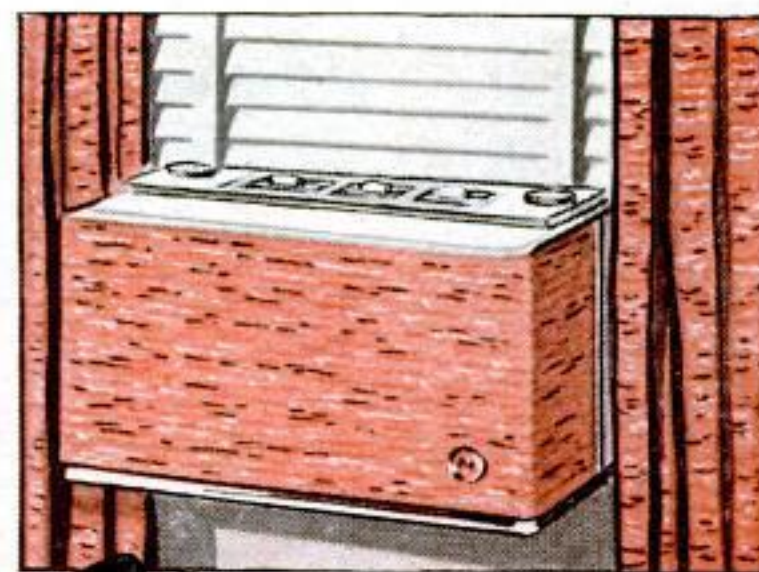
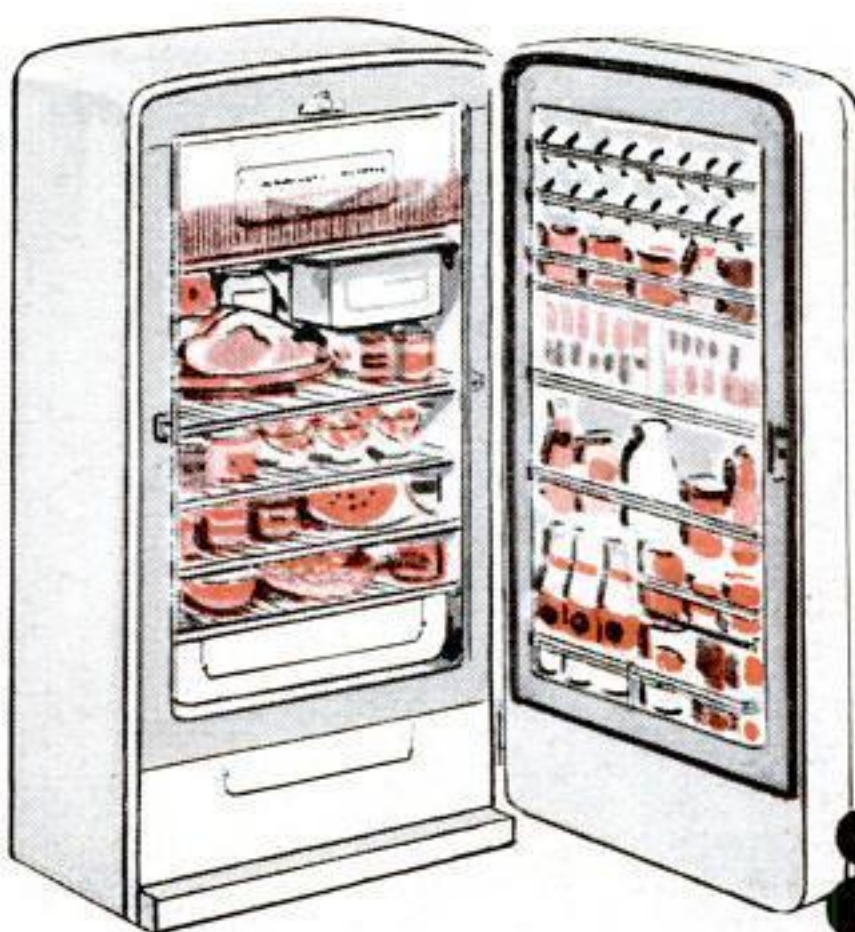
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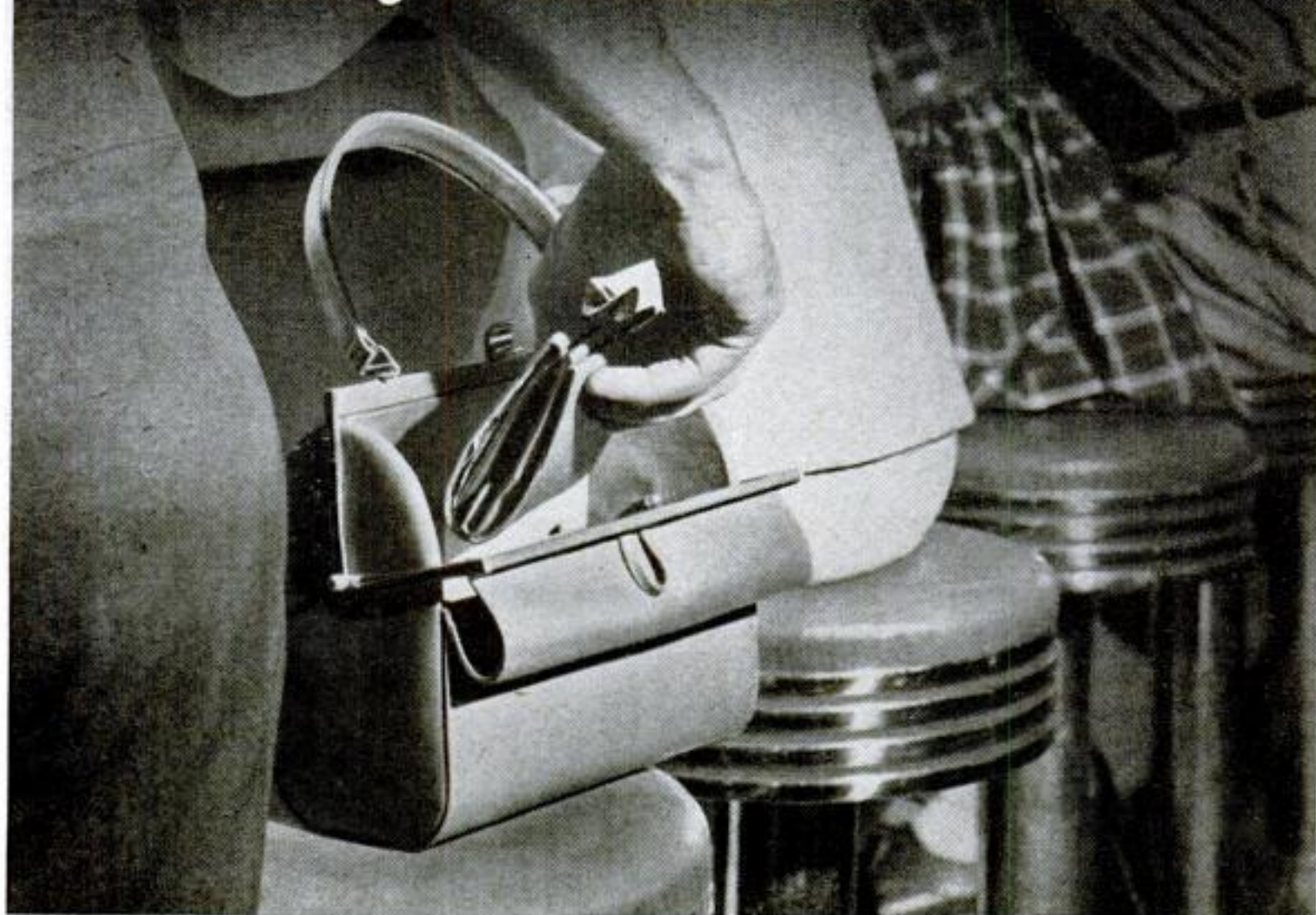
<input type="checkbox"/> IH Refrigerator Model A-120-D	<input type="checkbox"/> IH Upright Freezer Model AV-15
<input type="checkbox"/> IH Chest Freezer Model A-20	<input type="checkbox"/> IH Air Conditioner Model A-1100-D

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Stops
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THE MAIN RANCH near Chino, Calif. has dusty roads, crude-looking wire fences, cowboy outfits and none of the luxuries of eastern breeding farms.

COWBOY HORSE RACERS CONTINUED

was almost as humiliating as walking. As an elder of the Mormon Church he blessed babies, baptized adults, presided at wakes and weddings and moved from house to house hopefully trying to interest people in God.

When he wasn't worrying about saving people's souls he was crystallizing plans for the improvement of cow horses. When he returned to Arizona after three years, his mission completed, he was ready to put the plans to work. Meshach Tenney, who had served his two-year mission in Colorado, came back to fall into step beside Ellsworth. They borrowed a Thoroughbred stallion from the U.S. Army Remount Branch and crossed him with wild range stock.

The results were exciting. They got trimmer, obviously faster foals which turned out to be ideal cow horses. This helped them financially at a time when Ellsworth was making only \$50 a month and board as foreman and Tenney was earning only \$40 and board as cowhand. Because of their skill with a rope and the excellence of their mounts, they picked up prize money in rodeos at places like Pima and Thatcher.

They shunned the bucking events simply because they had no faith in official red tape. "I never compete in anything left to the opinion of judges, where there is no line to run to, no clock to go by," said Ellsworth. But when they paid \$2 to enter the calf-roping contest one of them invariably took home the \$60 first prize. When they joined forces in the team tying event—Ellsworth going for the head with his rope and Tenney for the heels—they were unbeatable.

The final turning point in Ellsworth's dream of fast horses came in 1933. He and his brother Heber had been talking about going into racing, and that spring Heber, returning from his honeymoon trip to Kentucky, brought back a Thoroughbred brood mare. That fall Ellsworth and Heber pooled all their ready cash, about \$625, and headed for Lexington, Ky. in a dilapidated Ford truck.

Buying by conformation

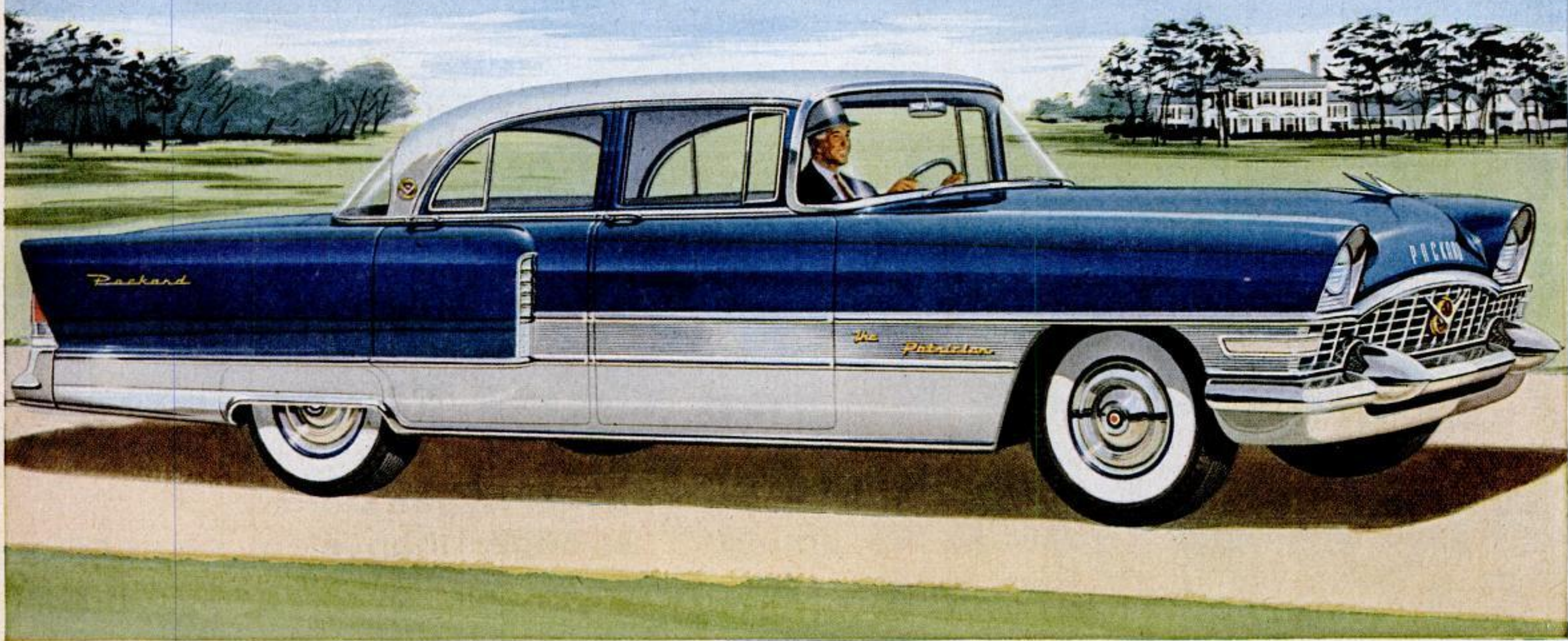
AT the fall sales in Lexington they could not afford to buy brood mares on their racing record because performance was too expensive a standard. The pedigree standard was less expensive but still beyond their meager bankroll. So they bought by the only standard they could afford, conformation, using the length-width-height-and-straight-legs rule that Rex had devised back on the range. They paid \$50 for this mare, \$75 for that one, buying eight in all. They put them in the truck and headed for Arizona, stopping at every lumber yard along the way to rebuild the rickety partitions the mares kept kicking out.

When they got home there was trouble. Their father, a man of strict conscience and Puritan principles, was aghast at the thought of his sons getting mixed up with race horses. A storm stirred in the Ellsworth household with Will Ellsworth losing his temper and his sons standing their ground. The argument rumbled on for years with Rex maintaining that if a carpenter built a saloon he was not responsible for the whisky sold in it. "It isn't my fault," he said, "if people bet on race horses I raise."

CONTINUED

The *New* PACKARD

WITH TORSION-LEVEL RIDE



260 HORSEPOWER PACKARD 'PATRICIAN'

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Packard owners are proud of the exclusive Torsion-Level Ride, the only suspension system which completely eliminates conventional springs and *beats riding on air*. The Packard skims over the roughest roads with the torsion suspension absorbing road shocks before they can wrack the car frame or disturb the passengers.

And a power-controlled levelizer *automatically* keeps the Packard level regardless of passenger or luggage load.

Packard owners are proud of the tremendous power unleashed at the touch of a toe. The Packard V-8 *delivers more driving force to the rear wheels (torque) than any other passenger car engine in the land . . .* developing 275 horsepower in the Caribbean and 260 in all other models. Packard owners can point proudly to the action of the new Twin Ultramatic, smoothest and most alert of all automatic transmissions, with an instantaneous

choice of lightning get-away or cruising glide. And Packard owners certainly view with pride the beautiful lines and the luxurious interiors bearing the inimitable Packard touch.

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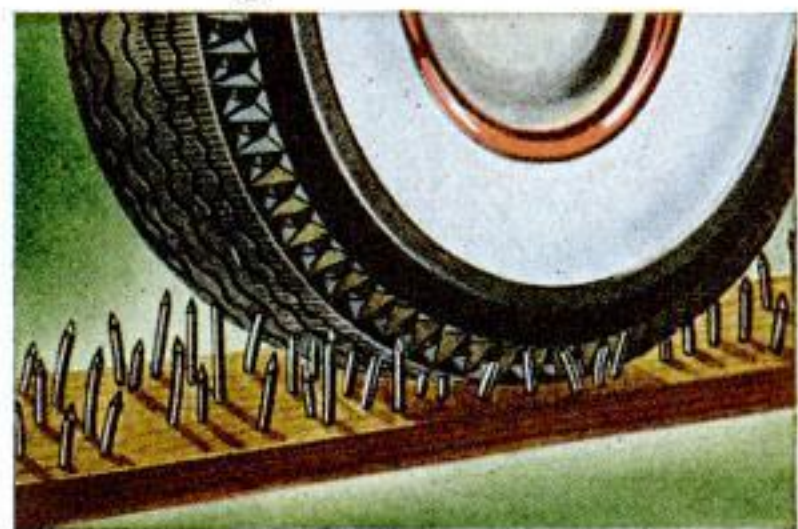


15,000 CROSS-TREAD SQUEEGEES
Enjoy cat's-paw sureness for quick stops,
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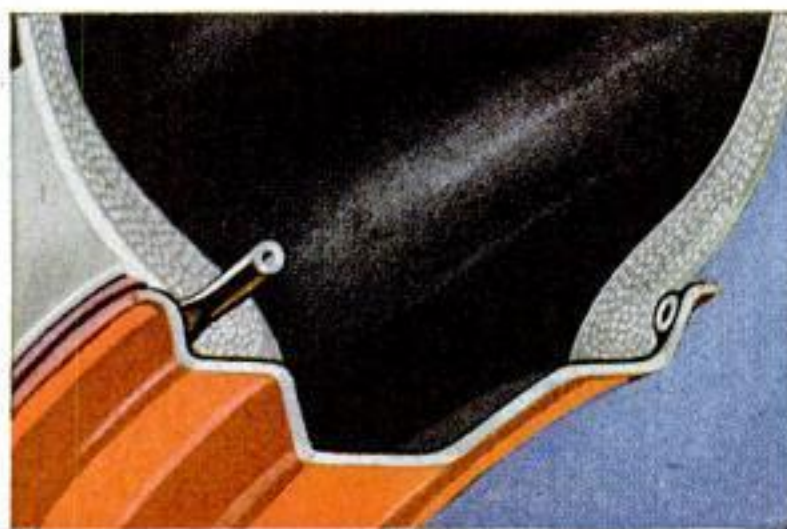
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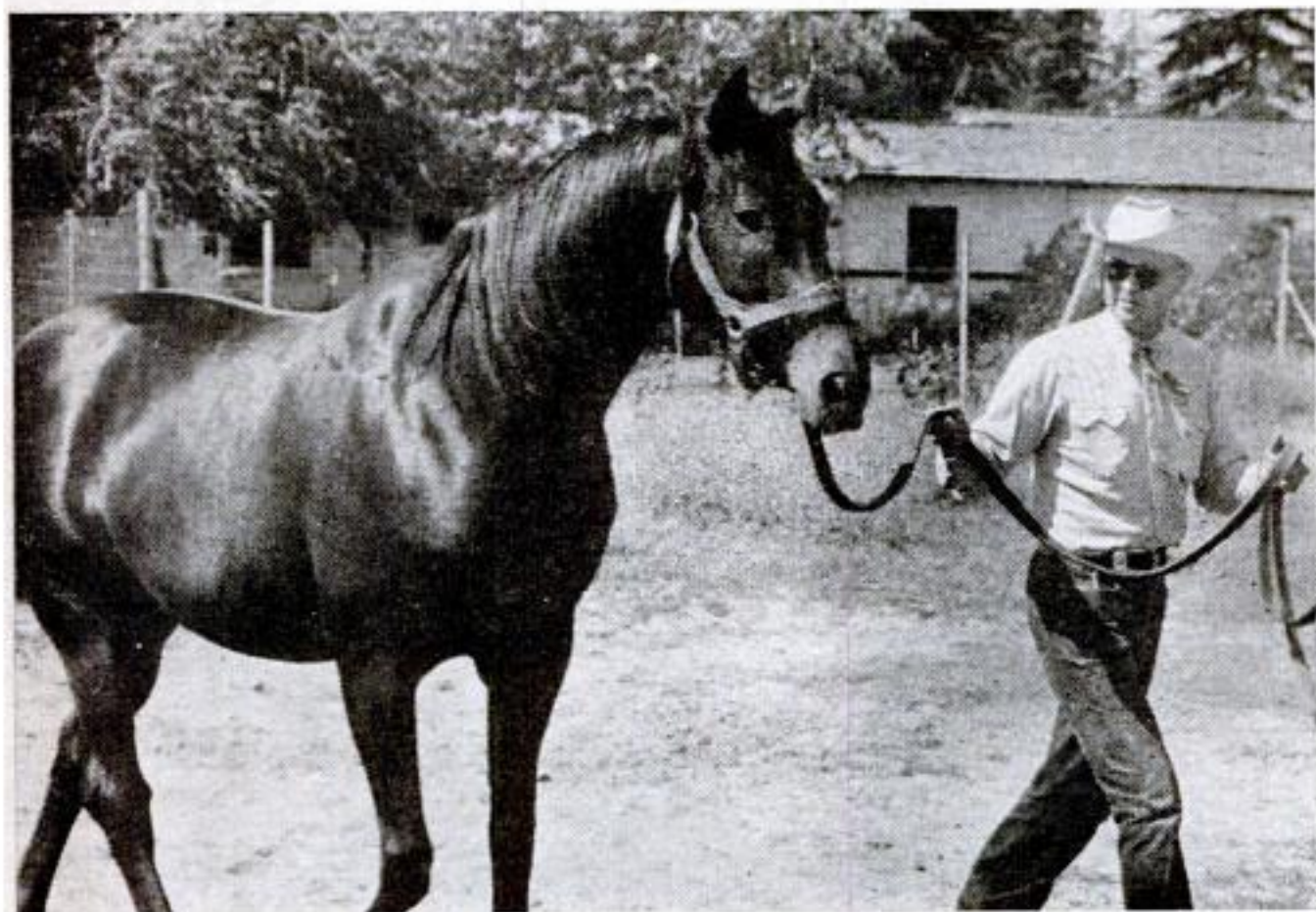
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GENERAL'S EXCLUSIVE "O-RING"
Only General has the "O-ring" Pressure-Lock—a positive air-seal at the rim.



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fits your present wheels**



\$160,000 SIRE of Swaps and Ellsworth's other top horses is Khaled, bought from Aly Khan on borrowed money during Ellsworth's 1946 trip to Europe.

COWBOY HORSE RACERS CONTINUED

But he was not going to raise any race horses without being able to breed his mares, and there was no suitable stud in all of Arizona. He circled back to Kentucky to shop for a bargain in stallions. He found one for \$1,250, a ridiculous price for good horseflesh even during the Depression, only he did not have even that much money. He told the man he would be back. Meshach Tenney mortgaged everything he had, a herd of heifers, to help raise \$600. His brothers kicked in what they had and Rex went back to claim his stud, a well-put-together gray named Silver Cord.

"I've been on borrowed money ever since," he confesses. Since the day he bred his first Thoroughbred horse he has been on a financial tightrope that would have scared anybody but a seasoned speculator. As the operator of an expanding cattle business, he carried bank loans up to \$350,000 on his herds. Sometimes the cattle carried the race horses and once, when the bottom fell out of the beef market, the horses picked up the slack and carried the cattle. But his cash on hand never caught up with what he owed, mostly because Ellsworth never stopped buying more brood mares.

His first stud, Silver Cord, was also the first that ever raced for him. He ran at the fairgrounds in Phoenix the day Meshach Tenney was married and won by four lengths. Spring Flower, one of the mares that Ellsworth had brought back from his first trip to Kentucky, turned out to be a superior dam whose foals won some 25 races. "Every foal she threw was a flying machine," her owner says respectfully.

Ellsworth Sr.'s protests were beginning to die down by 1946 when U-Time swept everything before her and won almost \$100,000. It was a bad year for cattle and what she and the rest of the stable won hardly made up the deficit at the ranch. But when Movie Magnate Louis B. Mayer offered Ellsworth \$100,000 for her, it was his father who stepped into the breach and said, "No, son, you can't sell her." Rex's father might not approve of racing, but he could not bear to sell a great horse.

Search for a super stallion

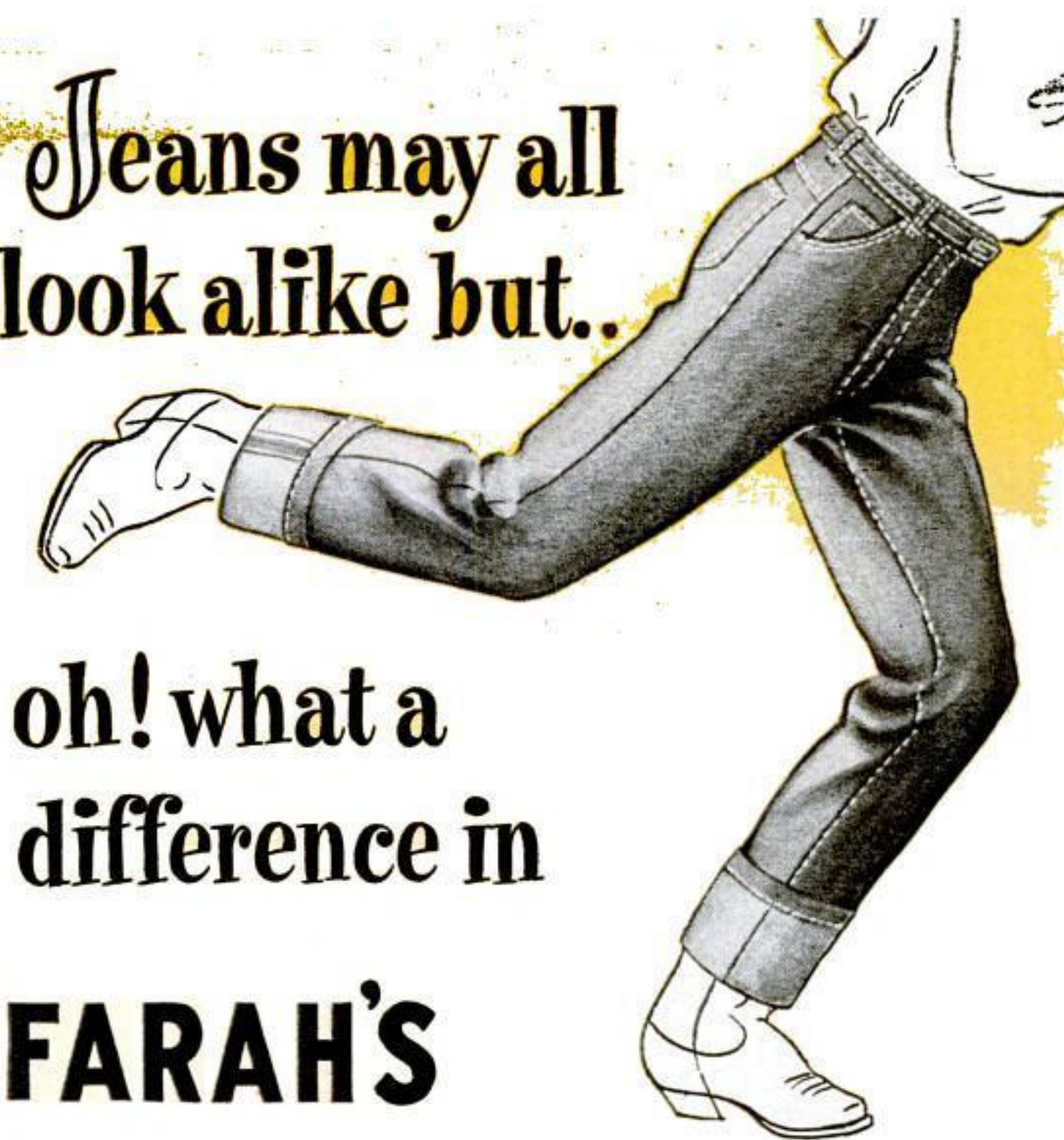
Ellsworth's theories on breeding fast horses, put into operation on a shoestring, took a costly turn nine years ago. He felt that he had to have a super stallion, one with perfect conformation, a royal pedigree and a fine racing record. No such animal was for sale in the U.S. His first stop was a bank in Denver where he explained that he wanted to borrow \$100,000. When they asked him why, he said truthfully, "I want to buy a horse." He got the money, with his ranch as collateral, and headed for Europe with his brother Heber. They inspected and turned down eight stallions in France and even more in England.

In Paris they met Prince Aly Khan, proprietor along with his father, the Aga Khan, of the finest blooded horses on earth. "They showed up to look at horses," said Prince Aly. "They looked so funny in their big cowboy hats. Well, I thought they had nice faces. I was going to Ireland and I said to myself here are these two nice chaps wandering around in big hats like a couple of cowboys, so I asked them to come with me. They spent a few days with me and looked at my horses."

Ellsworth looked at one of them, a fine hunk of horse known as

CONTINUED

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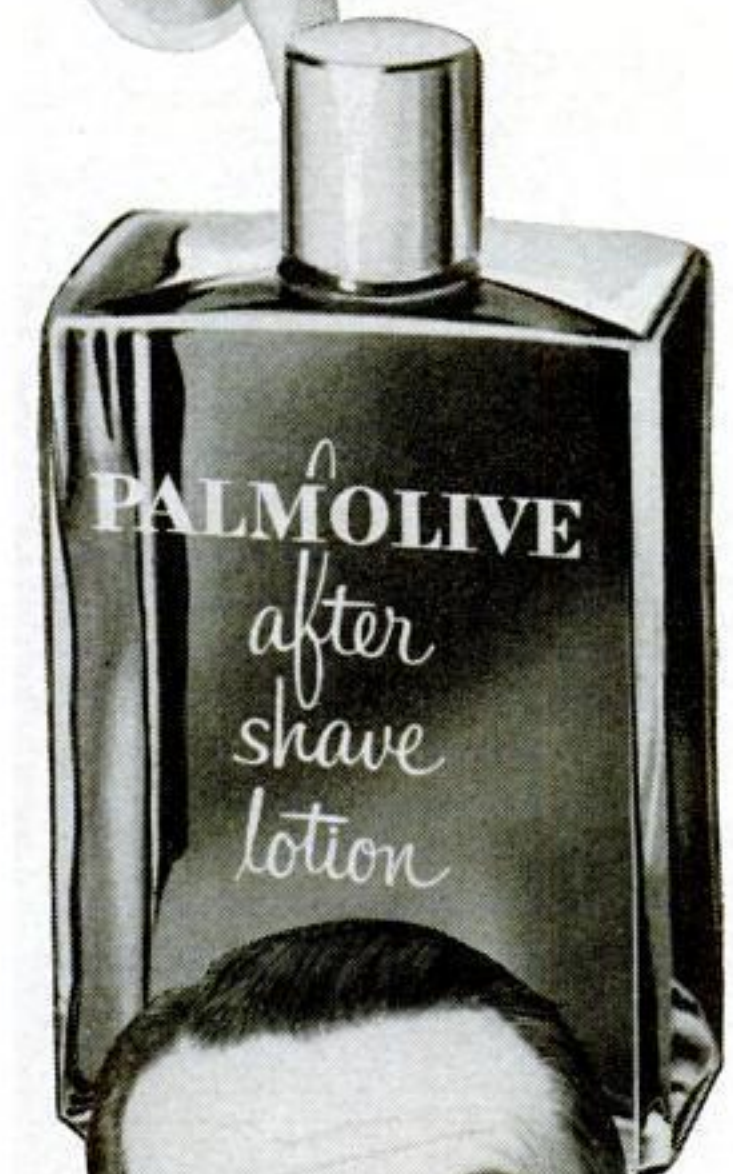
Slims and Huskies, too!

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*Huskies \$3.50



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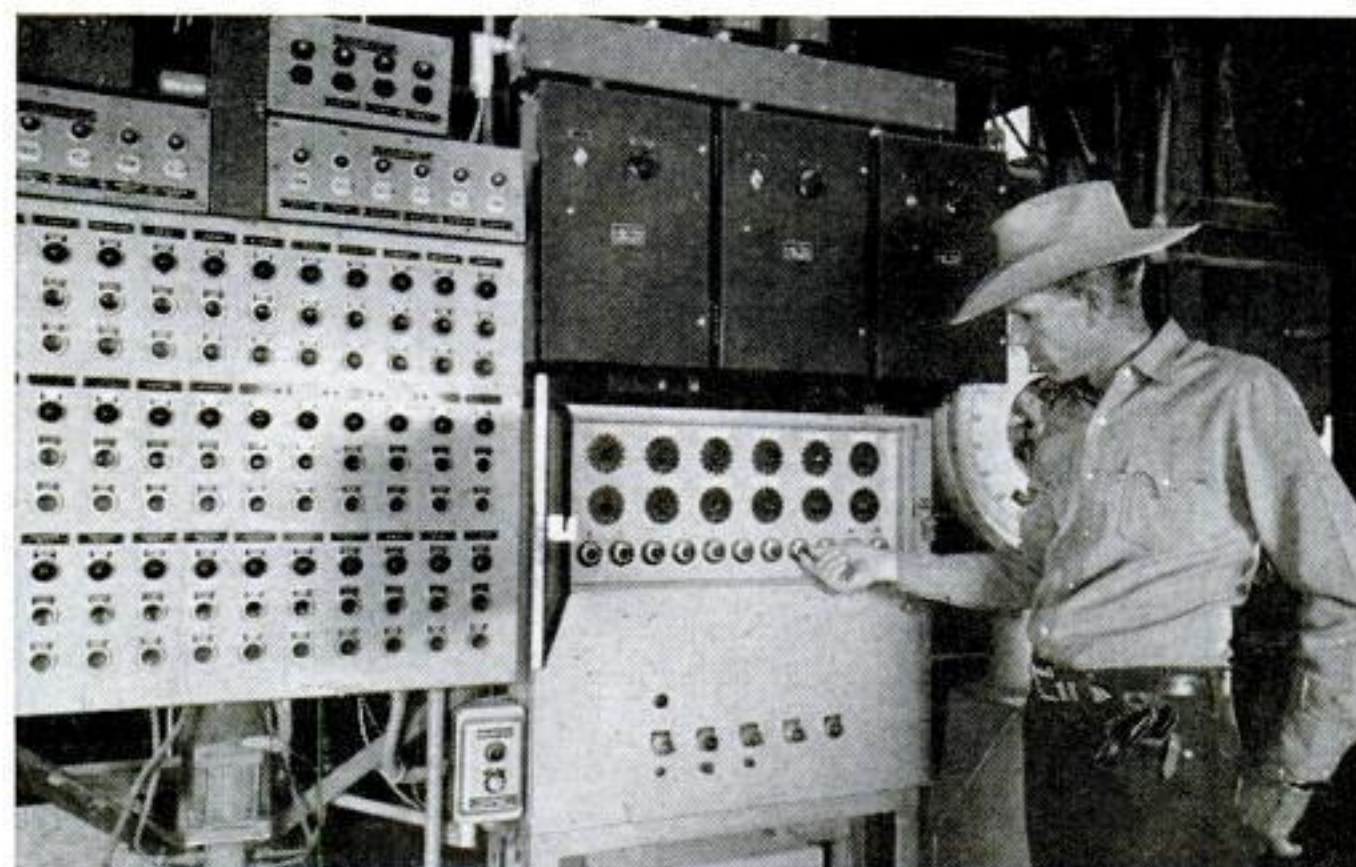


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5-OZ. SIZE **59¢**
deluxe size \$1.00
PLUS TAX



PUSHBUTTON FEED MILL was designed by Ellsworth, who can create hundreds of different mixtures of feed by using different combinations of buttons.

COWBOY HORSE RACERS CONTINUED

Khaled, for only two minutes and asked, "How much?" The prince said \$160,000 and Ellsworth looked again just to make sure. The horse was without a fault. He bought Khaled but told the prince that he had to go home "and rustle up another \$60,000." He went home and pried the additional money out of the banks.

Khaled was shipped to the ranch near Chino, Calif., which Ellsworth had just bought, also on borrowed money. It was a startling change from the Aga Khan's sumptuous show place in Ireland. The country was dull brown rather than green and no money was spent on luxuries, such as paint to keep the place looking presentable. All Ellsworth's time and money went into making it look like the Chicago stockyards with its efficient but unlovely system of pens and runways.

There was one expensive innovation which Ellsworth dreamed up himself and which he believes brings his horses to early maturity so that by the time they are 3-year-olds they are as strong as 4- or 5-year-olds. This is a machine, a monstrous 90-foot-high maze of cogs and conveyors known as the "feed mill." Ellsworth figured out by trial and error what a horse should eat, built a smaller test machine and then had the monster designed by an engineer and put together by a contractor. Worked by push-button, it measures ingredients, chops hay, mashes grain, removes dust, extricates bits of baling wire and dishes out a scientific mixture of corn, barley, bran, alfalfa, oats, linseed meal, de-worming powder, molasses and even kelp, which Ellsworth says is full of valuable minerals. Ellsworth now feeds his formulas into the machine as though it were an electric brain.

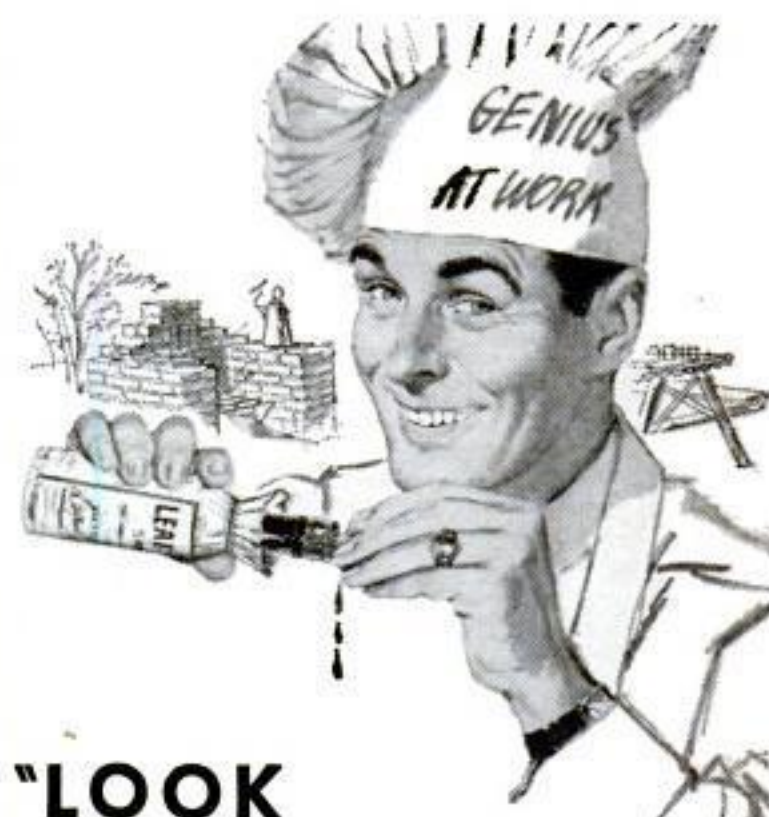
Horses are not people

THERE are economies which make up for big expenses like the feed mill. At the track Tenney uses only half as much straw as other stables, believing that lush straw bedding a foot deep keeps the air from circulating around a horse's feet. The big saving is in stable help. Where other stables have one man for every three horses Tenney has one for every 10. "People think that horses are people," says Tenney. "They aren't people, they're horses. Horses are 10 times as tough as people."

When Khaled had produced four crops of foals he had paid for himself. In 1952 he was the country's leading sire of 2-year-olds and among his fifth crop was a chestnut colt which looked fine physically but seemed in danger of never racing for lack of a name. Three times Ellsworth sent in names for him only to have them rejected because they were already taken. Ellsworth and Tenney and their families were sitting around swapping ideas for the nameless wail when somebody suggested calling him Swaps—and it stuck.

Swaps, the horse that lifted the mortgage, started out modestly winning three of his first six races. He got a case of influenza last year and then an infected foot. Blacksmith Tenney put a special pad between the shoe and the hoof, packing it with disinfectant. The horse seemed to be more tolerant of human beings than other horses and equipped with more intelligence. He seemed to grow up suddenly as he turned 3, filling out his long, high, wide frame. He has won all his races as a 3-year-old, including the Kentucky and Santa Anita derbies, but this has not caused Ellsworth or Tenney to show any sentiment toward him.

CONTINUED



"LOOK CLOSER, ladies"

You'll see how a man likes barbecue... with plenty of Lea & Perrins Worcestershire. Brings out the rich, robust flavor that tastes so extra good outdoors... and sharpens his appetite indoors, too. So use it freely in cooking... and at the table.



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Italian-style Spaghetti Sauce with Mushrooms!

HERE AT LAST is a meatless spaghetti sauce with *Italian* flavor! It's brand new and delicious—prepared for you by FRANCO-AMERICAN.

There's nothing half-hearted about this meatless sauce. When we say it's made with mushrooms, we mean *mushrooms*. Plump, tender beauties you can see and taste. Carefully hand-picked and then cooked in a rich, thick tomato sauce that tastes

just like the slow-simmered kind Italians make.

The recipe is a secret, but to give you an idea of its homey flavor, here are a few of the other twelve ingredients. Juicy, vine-ripened tomatoes. Onions. Celery. Garlic. Spices!

No need to tell you this new mushroom sauce is a life-saver for meatless meals. But don't forget it's darn good eating *any* day. And so easy. Just

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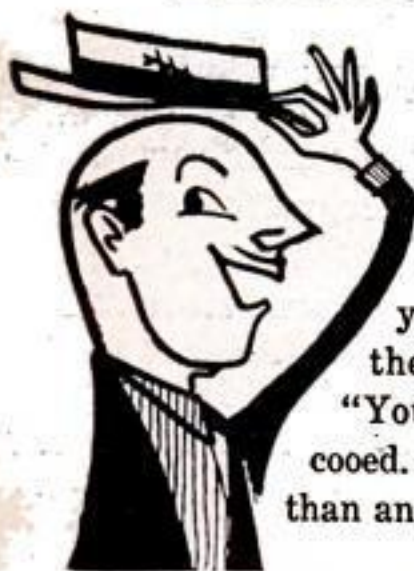
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"ALL-RITE"

said the
traveling
man



The young lady giggled. "So that's your line." "Best line there is," he boasted. "You're so right," she cooed. "Nothing's smoother than an All-Rite pen."

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Dr. Scholl's Zino-pads

"Swaps wouldn't wink his eye for me if he didn't have to," says Tenney, but he could not help noticing with pride how readily Swaps oriented himself on his first train ride en route from California to the Kentucky Derby. He sniffed around the railroad car, investigating the noise and vibration, then lay down and went to sleep, leaving the cow pony that was brought along as company to squeal and thrash around.

For two weeks before the Derby, Tenney cat-napped in Swaps' stall at night—not for sentiment's sake but just to make sure nobody tampered with him. On the big day at Churchill Downs he ran away from Nashua, the pride of the east, while Ellsworth and Tenney sat stoically behind their field glasses. After making note of the fact they were \$108,400 richer, a help toward paying off some of the mortgage, they had their pictures taken with Swaps and then Meshach Tenney said with a casual grin, "Well, that's the Kentucky Derby."

A bad moment for Ellsworth

ONE of the few times that Ellsworth or Tenney has shown anything but a poker face during a race was one month later at Hollywood Park. Swaps, a young 3-year-old, was stepping far out of his division to face the classiest old pros on the West Coast in another \$100,000 race. His regular rider, Willie Shoemaker, had been suspended and his substitute, Dave Erb, had been given explicit instructions to hold Swaps back. When Erb followed orders too literally and Swaps came by the stands the first time throwing his head and fighting to run, the blood drained from Ellsworth's face and he became deathly pale. He began pounding the rail with his fists and finally shouted, "Let him go! Let him go!"

As if some hidden transmitter had got the message through, the jockey eased his hold and the horse settled into a smooth, powerful stride. He caught the leader at exactly the right time and, taking the lead in the stretch, won under wraps. Without ever being touched by the whip, Swaps had not only humbled older, more experienced horses but had set a new world's record of 1:40 2/5 for 1 1/16th mile.

All things considered, it was one of the greatest races ever run by a horse on the North American continent. As a result Ellsworth is relatively calm about the match race with Nashua this month. "We feel kind of confident that we have quite a bit the best horse," he says. "I guess Nashua will try to push us a bit early. We've been pushed before. Any horse that's ever pushed us has wilted."

But Ellsworth has other things to interest him besides the match race. One is Swaps' full brother, a 2-year-old named Like Magic, who is better right now than Swaps was a year ago. Next year, if all goes well, Ellsworth doesn't see how Like Magic can miss winning the Kentucky Derby.

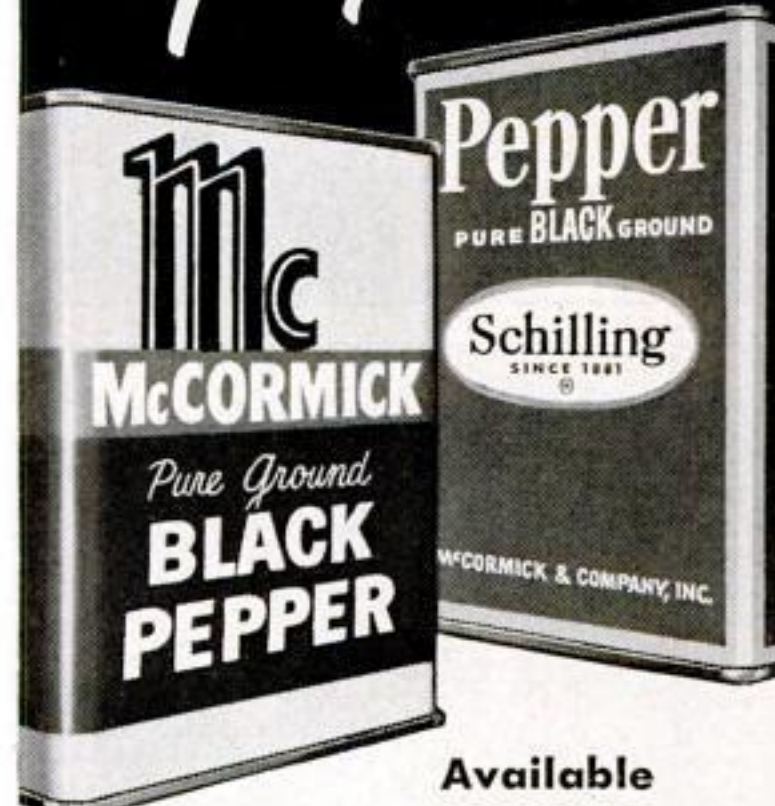
But the only foal ever born that turns Ellsworth to jelly inside is Swaps' 3-month-old youngest brother. Every time Ellsworth sees him he gets excited and starts jabbering like a doting parent. He points to the bulging quarters and the slope of the pastern, the straight legs and beautiful balance. He insists that anybody could study this colt forever without finding a blemish, and he finishes by saying, "If anybody else owned this horse it would kill me."



SWAPS' BROTHER, 3 months old, here frisking with Tenney, is Ellsworth's favorite colt. He meets all Ellsworth's rigorous standards, is still unnamed.

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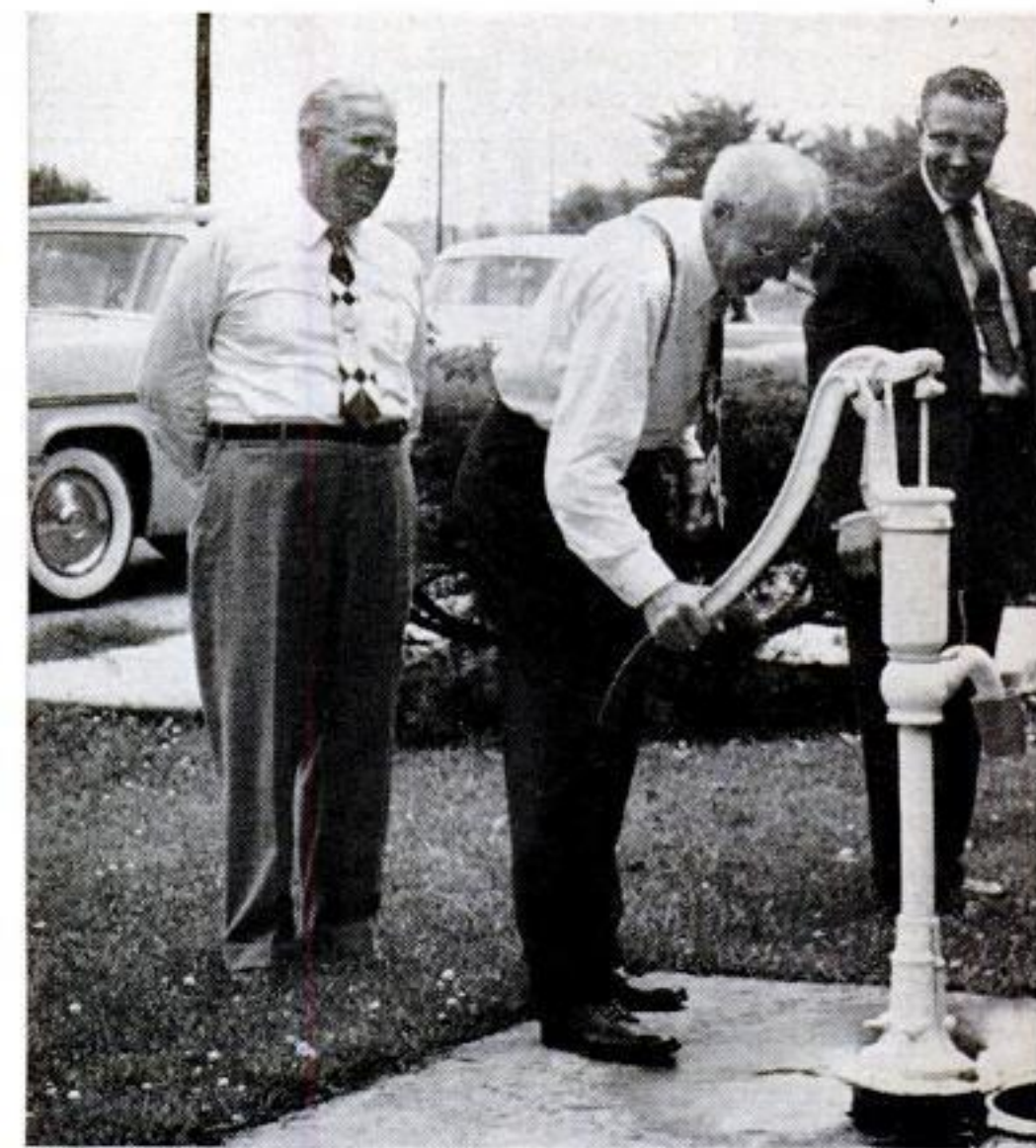
WINSTON
TASTES GOOD—
LIKE A
CIGARETTE
SHOULD!





SAME POSE 40 YEARS LATER is imitated by family in 1955 photograph (*bottom*) to bring 1915 picture up to date. As in 1915, Mama and Papa sat on either side with Edison on the floor. Miriam, who sat on her mother's lap in 1915, is now at her

knee. In rear are Harold, Amanda, Ralph, Rhoda, Edgar, Idella, Melinda and Edith. Between their mother and father are Phoebe and Jesse. In 1935 Edith, Edison, Papa, Mama, Jesse and Phoebe were in the front row with other children in the rear.



AT WELL IN CHURCHYARD PAPA PUMPS MAMA

40-YEAR FESTIVAL

Ohio clan holds reunion

In 1915 William and Emma Neuenschwander posed for a picture with their 12 children in a studio in Bluffton, Ohio. Twenty years later, in 1935, the family gathered again for another family portrait. Two weeks ago, 40 years after the first picture was taken, the family went back to have another portrait made in the same studio—as nearly like the 1915 picture as could be managed (*below, left*).

It was a festival day for the Neuenschwanders. They prowled about the farm where most of the children were born and where they once used the pitch on the shed for chewing gum. On the way to a celebration dinner in the home Papa and Mama now share with the eldest daughter they stopped at their old church. There one of the boys, a minister, summed up the feelings of all: "Thank Thee," he prayed, "for godly parents . . . this unbroken circle."

ON THEIR FARM NEAR BLUFFTON FAMILY SPOTS





SOME COOL WATER INTO THE COMMUNITY CUP



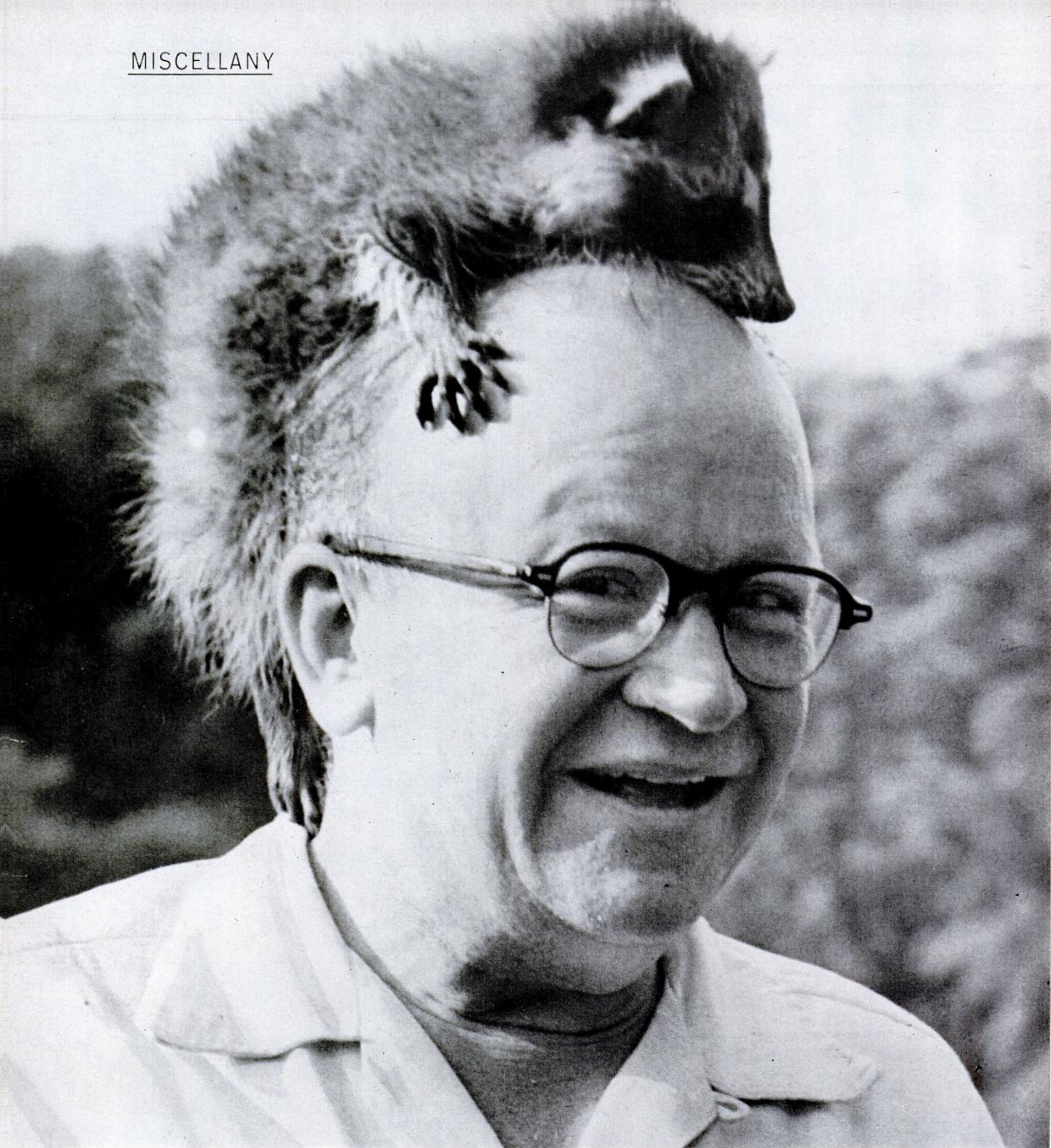
IN THEIR CHURCH Mr. and Mrs. Neuenschwander kneel at altar while Jesse leads a family prayer.

EDISON'S CHILDHOOD FOOTPRINT IN CONCRETE



FAMILY MUSTER brought 13 grandchildren and 22 great-grandchildren (out of a total of 67) from

all over U.S. to see grandparents and each other. Counting in-laws, the family now numbers 110.



CROCKETT FAN'S UNSKINNED COONSKIN

Just as the Davy Crockett craze showed signs of slipping, along came a man named Roscoe Marks to give it a new fillip: a Crockett raccoon cap with the coon still inside. A restaurant proprietor in Huntingdon, Pa., Marks got used to hearing about Crockett 100 times a day on the juke box and being ambushed at home by his Crockett-loving son Gary, 12. Then, driving from work, he was

startled to see a young raccoon fall out of a roadside tree. Realizing the coon population was dwindling as a result of the demand for coonskin caps, Marks adopted the nameless orphan. Now 6 weeks old and still nameless, the coon loves to climb up Marks's leg and cling to his balding head, rewarding his owner's kindness by making him the envy of every other Crockett fan in town.



(PHOTO—GRAND CANYON, ARIZ.)

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